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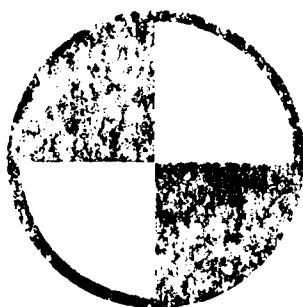
Cultural Resource Management Report

FINAL REPORT OF
AN ARCHAEOLOGICAL INVENTORY
OF PORTIONS OF THE DEVILS LAKE BASIN,
BENSON, EDDY, NELSON, AND RAMSEY COUNTIES,
NORTH DAKOTA

Lead Field Investigator Mervin G. Floodman, M.A.

Principal Investigator Mervin G. Floodman, M.A.

Date 1/18/89 For U.S. Army Corps of Engineer
St. Paul District



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OF PORTIONS OF THE DEVILS LAKE BASIN,
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NORTH DAKOTA

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Mervin G. Floodman
Mervin G. Floodman
Principal Investigator

MANAGEMENT SUMMARY

In the Fall of 1986 and the Spring of 1987, Powers Elevation, Inc. (Powers) performed a cultural resources inventory of portions of the Devils Lake flood control project area in northeastern North Dakota. This work was performed under Contract Number DACW37-86-M-1556 for the U.S. Army Corps of Engineers, St. Paul District (Corps). The goal of the investigation undertaken by Powers was to partially fulfill the obligations of the Corps in regards to the federal laws and regulations which dictate how cultural resources impacted by government projects should be managed. This report should serve as a planning tool for the Corps, providing information about the type, number, and location of significant resources in the project area, and identifying where additional investigations may be necessary prior to construction.

This project is being considered to reduce potential flood damages from future raises in the level of Devils Lake. The proposed flood control alternatives include five outlet channel combinations from Devils Lake to the Sheyenne River, and possibly increasing the storage capacity of six upstream lakes.

The Corps previously had a geomorphological study conducted for the Devils Lake Basin, to interpret the Pleistocene and Holocene development of the landscape, and assess the relationship between landforms and potential archaeological site locations. The investigation performed by Powers consisted of a statistically based, systematic sample survey of portions of the project area, to test the probability of predicting archaeological site locations based on the study of specific geomorphic units.

Powers inventoried 2,000 acres in Nelson, Benson, Eddy, and Ramsey Counties, North Dakota. Eighty percent (1,600 acres) of this sample was concentrated on the channelization plans, and 20% (400 acres) was located around the upstream lakes. Of the total, 94% of the land surveyed was selected through a non-random statistical process aimed at the examination of the different landforms, sampling all of the project alternatives. The remaining six percent of the sample was intuitively selected in the field.

Field work was carried out from October 13 to 30, 1986 and May 18 to 22, 1987, under the direct supervision of Mr. Mervin G. Floodman, Principal Investigator for Powers. During the survey, a total of 21 new cultural resources were identified. This included 11 prehistoric sites, nine historic sites, and one multi-component site. In addition, 11 isolated finds, all prehistoric artifacts, were recorded. A review of the archaeological literature for the region showed that 44 previously recorded cultural resources are located in the Devils Lake project area. This report attempts to synthesize

the data from the Powers survey, along with previous investigations, in an attempt to make broad statements about the location of cultural resources within the Devils Lake Basin.

None of the historic sites recorded by Powers is considered eligible for nomination to the National Register of Historic Places (NRHP). No further work is recommended at those sites. Of the 12 prehistoric components, four were judged to be ineligible for nomination to the NRHP and no additional investigations are recommended at those resources. The other eight prehistoric sites are of undetermined NRHP status. If they are to be impacted by future Corps actions, it is recommended that a Phase II archaeological testing program be conducted at each of the sites to assess the nature and significance of their subsurface remains. None of the isolated finds are considered significant and no further work is recommended at those locations.

The results of the inventory by Powers indicates there is little significant correlation between specific landforms and archaeological site location. The majority of prehistoric sites were found on terminal moraine deposits because this is the most common geomorphic unit in the project area. Outwash channels and ground moraine appear to have a lower potential for archaeological sites. Few sites were found on lacustrine deposits. However, other investigations along the larger lake shores indicated that archaeological sites are located above the 1,450 ft elevation which marks the prehistoric strandline for the Devils Lake-Stump Lake complex.

Overall site density in the Devils Lake project area is about one prehistoric site per 167 acres inventoried. Cultural material scatters were the most common prehistoric site type recorded by Powers. Incorporating previous surveys, mounds are the most common archaeological site recorded in the region. However, this is thought to be the result of past sampling biases. Stone circle sites are relatively rare, apparently because they have been destroyed by modern farming practices. In the Devils Lake-Stump Lake area prehistoric sites are found relatively far from permanent water, probably because the prehistoric levels of these lakes were once much higher. Between the Devils Lake-Stump Lake complex and the Sheyenne River prehistoric sites were found closer to permanent sources of water, mainly in the form of smaller lakes which dot the region, especially in the outlet channel areas. The sites with the shortest distance to water were located in the bottoms of the Sheyenne River Valley and along the upstream lakes.

The most sensitive project alternative, in terms of cultural resources, is channel Plan 5C, which could impact three archaeological sites. The next most sensitive area would appear to be around the upstream lakes, where archaeological

sites are located close to the modern shoreline. It should be emphasized that Powers' work was not a complete survey of the project alternatives. It is recommended that a 100% intensive pedestrian cultural resources inventory be conducted on whichever alternative the Corps selects.

The findings have been biased by several factors. This includes the level of funding, the small sample size, time constraints, the location of the project alternatives, and the priorities of the Corps.

Few artifacts were collected in the field during the Powers survey. The analysis of lithic artifacts was performed by Mervin G. Floodman of Powers. Dr. Ann M. Johnson of the National Park Service analyzed the small ceramic collection. All artifacts and copies of reports from this project will be curated at the State Historical Society of North Dakota (SHSND). Copies of the field notes will be on file with the St. Paul Corps. All original notes and photographic negatives are on file at the Denver Office of Powers. The total budget for this project was \$22,832.00.

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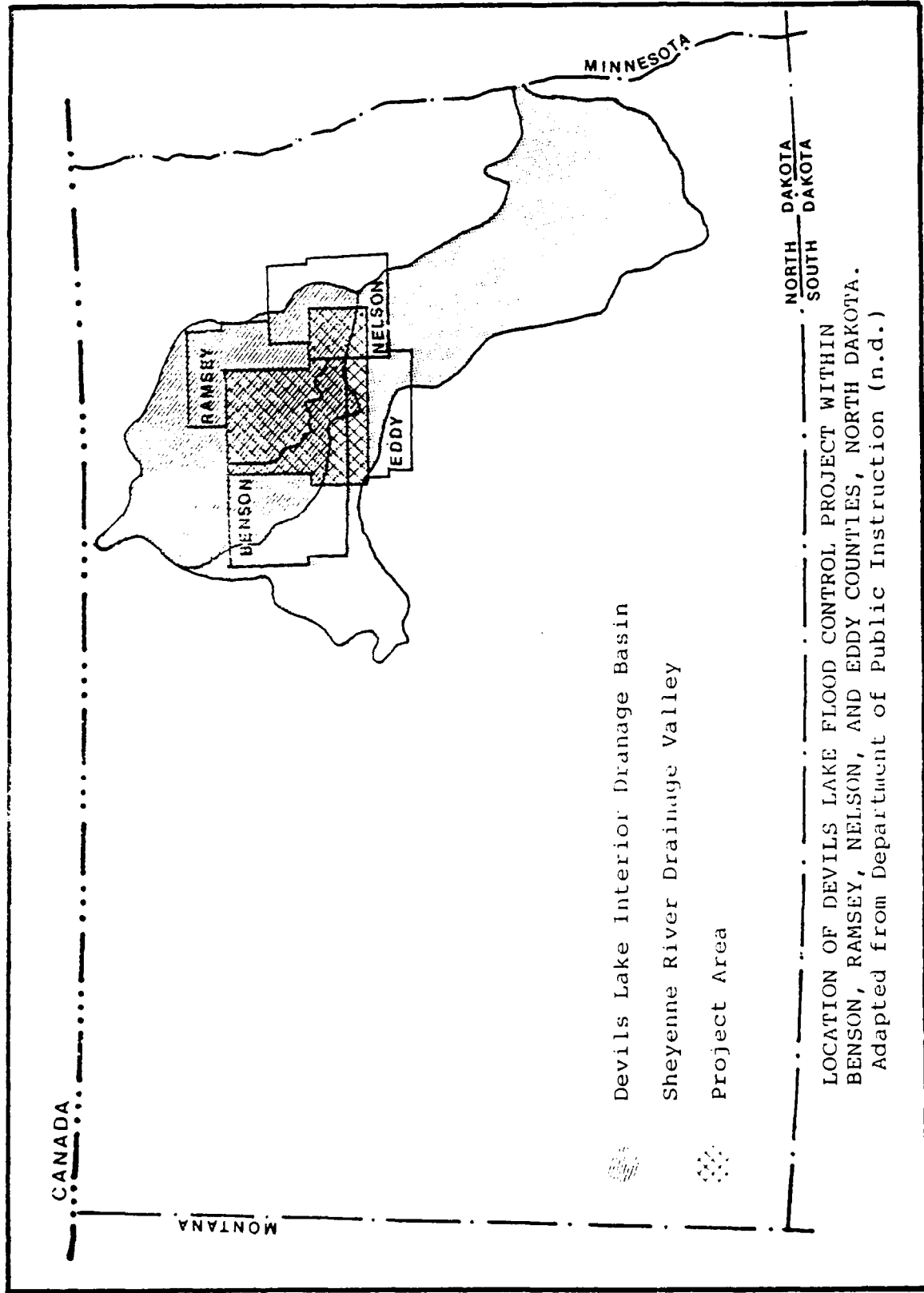
1.0 INTRODUCTION

The St. Paul District of the U.S. Army Corps of Engineers (Corps) has proposed a flood control project to reduce possible future damages due to the rising level of Devils Lake. At the present time, a number of alternatives are being considered, including five outlet channel plan combinations from Devils Lake to the Sheyenne River, and increasing the storage capacity of six upstream lakes. The various alternatives fall within the Devils Lake interior drainage basin and a portion of the Sheyenne River Valley. The total area of the flood control project covers some 47 townships (1,692 sq. mi), including parts of Ramsey, Nelson, Benson and Eddy Counties in northeastern North Dakota (Figure 1). Archaeologically, the area is within the Northeastern Plains prehistoric cultural region. Environmentally, it is located within the Drift Prairie region of the Central Lowlands.

On September 2, 1986 the Corps awarded Contract No. DACW37-86-M-1556 to Powers Elevation, Inc. (Powers) to conduct a reconnaissance survey of cultural resources within the Devils Lake project area. Powers investigation serves several purposes. It should allow the Corps to meet their federally mandated obligations in regards to the management of cultural resources. This report will also be a planning tool, and a scientific reference for future professional inquiries. The survey recorded all sites, structures, and objects of historical, archaeological and architectural significance within the areas inventoried according to the contract scope-of-work (U.S. Army Corps of Engineers 1986) and the Powers research design (Floodman and Friedman 1986). These sites were then evaluated according to the criteria for nomination to the National Register of Historic Places (NRHP), as listed in 36 CFR Part 60.4. This report identifies cultural resources that may require additional work and discusses areas of high resource potential, based upon geomorphological studies and archaeological site patterning. The project scope-of-work is included as Appendix A of this report. The Powers Research design is included in Appendix B.

The alternatives which are most likely to be selected by the Corps include channels 2, 3, 5, 6, 7, and various combinations of these plans (Figure 2). These channel Plans are briefly described below, based upon the project scope-of-work (U.S. Army Corps of Engineers 1986).

1) Plan 2. This channel starts on the west side of the West Bay of Devils Lake and heads southwesterly to join the Sheyenne River upstream of the town of Sheyenne. The plan would have cuts up to 30 ft deep, with most of the channel between 10 and 15 ft deep. There would be two pump stations along the route to lift the water about 100 ft. Three lakes



Devils Lake Flood Control Project
Figure 1

(Stoney, Round and Long Lakes) would have their levels raised along the route. The total length of the proposed channel is approximately 14 mi.

2) Plan 3. Starting on the south side of the West Bay of Devils Lake and proceeding southeasterly, this channel joins the Sheyenne River downstream of Sheyenne. The plan would be cut up to 25 ft, with an average depth of about 10 ft. There would be two pump stations along the route to lift the water about 80 ft. Several small lakes and wetlands would have their water levels raised about 30 ft. The total length of the route is approximately 12 mi.

3) Plan 5C. This channel starts on the south end of Black Tiger Bay off of East Bay of Devils Lake and proceeds southerly to join the Sheyenne River near Warwick. The plan would be an average of 10 ft in depth. There would be one pumping station to lift the water about 50 ft. The approximate total length of the channel is 10 mi.

4) Plan 6. Beginning at the south end of East Devils Lake, this channel heads southeasterly to join the Sheyenne River near Tolna. The average depth of the cut would be about 10 ft and there would be one pumping station. The approximate total length of the plan is 20 mi.

5) Plans 7A-F, 7A, and 7B-D. This alternative consists of a series of channels connecting Devils Lake with Stump Lake and then draining to the Sheyenne River. One section (7A-F) will be a channel from East Devils Lake to West Stump Lake. The two other segments (Plans 7A and 7B-D) begin from the south end of West Stump Lake and connect with the route of Plan 6, following Tolna Coulee southeast to the Sheyenne River near Tolna. Plan 7A leaves West Stump Lake along a natural outlet channel route heading west and then south, while Plan 7B-D would cross a high ridge on the south side of West Stump Lake before joining Tolna Coulee. If this alternative is built, West Stump Lake would have its water level raised about 10 ft and East Stump Lake about 25 ft. The Corps plans for these channels are uncertain and may utilize gravity flow outlets, pumping stations, or a combination of the two. Plan 7, with its various channels, totals approximately 20 mi in length. At present, this alternative is the one most favored by the Corps.

Another flood control alternative under consideration by the Corps is to increase storage levels of six lakes north of Devils Lake. The upstream lakes which may be affected include Sweetwater Lake, Morrison Lake, Dry Lake, Lake Alice, Lake Irvine and Chain Lake (Figure 2). These lakes would have their water levels elevated about 10 ft. The raising of the lakes is the least likely of the project alternatives being considered by the Corps.

Prior to releasing the current archaeology contract, a study of the geomorphology of the Devils Lake Basin was conducted by Robert Larson, a geologist working for the Waterways Experiment Station (WES) in Vicksburg, Mississippi (Larson 1986), a research laboratory of the Corps. The objectives of the geomorphic investigations were to: 1) interpret the Pleistocene and Holocene geomorphic development of the Devils Lake region; 2) determine the relationship between geomorphology and archaeology site location; and 3) determine the potential for locating cultural resources in the project area according to landform. Larson's study was confined to the area from Devils Lake south to the Sheyenne River, where the channelization plans may be constructed.

The Powers cultural resources investigation consisted of three main tasks, as outlined by the project scope-of-work (U.S. Army Corps of Engineers 1986). The first task was the development of a sampling design. At least 90% of the survey was to be based upon a statistically defined, systematic sample, while up to 10% was to be an intuitive survey. The inventory was to focus primarily on the channelization plans, with a secondary examination of the upstream lakes. The goal of the sampling design was to determine the areas to be surveyed in such a manner so as to provide data necessary to generate a probabilistic model for site location within the specific geomorphic units described by Larson (1986). This design was discussed with St. Paul District Corps archaeologist David Berwick in a meeting held with Powers representatives on October 2, 1986. Powers then wrote and submitted a formal research design to the Corps on October 8, 1986 (Floodman and Friedman 1986). The research design is summarized in Section 5.0 of this report, and is included in its original form in Appendix B.

The second task was the archaeological inventory of the selected survey parcels. The reconnaissance was directed by Mervin G. Floodman, Principal Investigator for Powers. A file search for the project area was performed by Nick G. Franke on September 15, 1986, at the State Historical Society of North Dakota (SHSND) in Bismarck. The field work was conducted in two segments, one in the Fall of 1986 and the other in the Spring of 1987. The Fall of 1986 survey covered 90% of the selected project areas, before being terminated by adverse weather conditions. This field work was done on October 13-17, 21-25, and 28-30, 1986. Archaeological crew members included Nick Franke and James M. Brechtel. A preliminary field report summarizing this portion of the survey was written by Powers and submitted to the Corps on November 14, 1986 (Floodman 1986). Field work was resumed in the Spring of 1987, with the remaining 10% of the survey sample units being inventoried. This work was done by Mervin G. Floodman and Gregory S. Newberry from May 18-22, 1987. A preliminary field report of the 1987 survey was submitted to the Corps on June 3, 1987 (Floodman 1987).

The third task was the production of this report, which represents the final documentation of the survey results. The report was written by the Powers Principal Investigator, Mervin G. Floodman. It was edited by Paul D. Friedman and Marcia J. Tate, and typed by Sara L. Roberts of the Powers staff in Denver. Mr. Stephen Sturm, M.A., consulting geologist, reviewed the environmental background section (3.0) of this report. Dr. Ann M. Johnson, Ph.D., of the National Park Service, provided a brief analysis of the few ceramic artifacts collected during the survey. All collected artifacts will be curated at the SHSND. Original notes and photographic negatives will be stored at the Denver office of Powers, while a copy of the field notes will be filed with the St. Paul District of the Corps.

2.0 PREVIOUS ARCHAEOLOGICAL AND HISTORICAL STUDIES

The study area for the proposed flood control project was defined using the maps accompanying the scope-of-work (U.S. Army Corps of Engineers 1986). The potential project area covers a total of 47 townships, encompassing 1,692 sq. mi, in portions of Nelson, Benson, Ramsey, and Eddy Counties, North Dakota. A literature review was conducted at the SHSND by Nick Franke for Powers on September 5, 1986. The files search sought to discover all previously recorded sites located in T.150N., R.60W. to R.68W.; T.151N., R.60W. to R.68W.; T.152N., R.60W., to R.68W.; T.153N., R.62W. to R.66W.; T.154N., R.62W. to R.66W.; T.155N., R.62W. to R.66W.; and T.156N., R.62W., to R.66W. The listing, site location catalog, and relevant survey reports were consulted. In summary, 14 surveys, two test excavations, and one full scale excavation have been conducted within the defined project area. There are 267 previously recorded numbered sites in the project vicinity, including 141 within the city limits of Devils Lake. A total of 111 unconfirmed site leads are also listed for the project area. In addition to specific survey reports, 13 other manuscripts discuss the cultural resources of the Devils Lake region. The complete files search is presented in Appendix C of this report.

The first documentation of prehistoric archaeological resources in the Devils Lake area was published in 1896. During a geologic survey of glacial Lake Agassiz, Upham (1896) reported the presence of mounds along the shore of Devils Lake. He noted a complex, in excess of 40 mounds, on the southeastern end of the lake. Other than giving general locational information concerning these mounds, Upham presented little archaeological data, since he was mainly interested in the geology of the region.

The earliest archaeological work in the Devils Lake Basin was done by Henry Montgomery (1906). He excavated some 40 mounds and reported on hundreds of others in eastern North Dakota between 1883 to 1906. This includes the excavation of a number of the mounds observed by Upham in 1889. Montgomery's work is unsatisfactory and confusing by modern anthropological standards. It is not clear in his text how many cultures are represented by his materials. Cooper (1947a) suggests that pottery illustrated by Montgomery may have Upper Mississippian influences. Identification and recordation of some of the mounds excavated by Montgomery was done at a later date by Cooper (1947a), Schneider et al. (1977), and Dahlberg et al. (1983).

After the turn-of-the-century, attention turned away from the study of mounds and archaeological investigations focused instead on the village cultures of the Middle Missouri River Valley, in North Dakota (e.g. Will and Hecker 1944). Not until the 1930s and 1940s did cultural resources survey work

resume in the project area. A questionnaire was mailed out by the SHSND in 1930 about archaeological site locations in the region, which resulted in a number of site leads. Some archaeological investigations were conducted by the Works Progress Administration (WPA) in the 1940s. However, the WPA did a poor job of recording sites, with no formal site forms filled out, and locations given merely by full section, township and range, making relocation of sites difficult. These locations are considered as site leads. Some of the WPA sites have been relocated and recorded by the University of North Dakota (Schneider et al. 1977).

A preliminary appraisal of the Devils Lake area was made by the Smithsonian Institute River Basin Surveys (SIRBS) in 1946. The investigation by J. Joseph Bauxar and Paul L. Cooper was brief and nonsystematic. Five sites were recorded, and others were reported but not visited or recorded. Sites 32BE1 and 32BE2 are mound groups in Sully's Hill National Park Game Reserve recorded by Cooper. Site 32RY1, a small cultural material scatter, and mound complex sites 32RY2 and 32RY3 were recorded on the west side of Creel's Bay. They may have been dug by Montgomery. This report noted the high potential for archaeological resources in the Devils Lake region and recommended that more intensive survey work be done (Cooper 1947a).

Cooper and Bauxar also conducted a preliminary reconnaissance the Sheyenne River Valley in 1946 (Cooper 1947b). A number of sites were recorded within the valley and on the river bottoms. Again the survey was hampered by time constraints, but it was recommended that more intensive inventory work be done in this area because of the high site potential. Sites 32ED201, 32ED202 and 32ED203 were recorded along the Sheyenne River by Wood and Fenenga in 1951. No report of this survey could be found in the files of the SHSND.

The next cultural resources study in the vicinity of Devils Lake and the Sheyenne River Valley was undertaken by the SIRBS in response to the Garrison Diversion project (Mallory 1966). In 1965 the shoreline and sections of the lower fossil beaches of Devils Lake and Stump Lake were surveyed by Mallory and numerous sites were recorded. It was concluded that archaeological sites lay above the elevation of the restored pool, away from current lakeshores. Burial mounds were the largest site category recorded, with the possible exception of tipi rings. Mallory's work was not an intensive investigation of the Devils Lake Basin, since it was an overview of the entire Garrison Diversion Project, of what the basin was only a part. The lack of data from excavated sites prevented the identification of mound complexes by cultural affiliation, leaving questions remaining about the relationship between eastern Woodland and Plains Woodland groups.

In 1975 an extensive cultural resources inventory was performed by the University of North Dakota (UND) in the central section of the Garrison Diversion Unit for the U.S. Bureau of Reclamation (Schneider et al. 1977). A pedestrian survey of 52 miles of proposed right-of-way for the New Rockford Canal was conducted. Four branch canals, the Warwick Canal, the Warwick Lateral, the Tokio Canal and the Devils Lake Feeder Canal were surveyed. Also examined were the Warwick-McVile and New Rockford irrigation areas. Nineteen recreation areas along Devils Lake and Stump Lake were also inventoried by UND at that time.

As part of the UND study, 27 sites in Nelson, Eddy, Benson, and Ramsey Counties, North Dakota, which had been previously recorded by Montgomery (1906), Bauxer and Cooper (Cooper 1947a, 1947b), Mallory (1966), and others, were relocated and evaluated. UND also recorded a total of 26 new archaeological sites, of which seven were site leads previously noted by the WPA in the 1940s. These resources included 19 burial mounds, two tipi ring sites, one rock cairn site, one petroform site, three cultural material scatters, and one bison drive site (Schneider et al. 1977). Like Mallory, the UND investigation failed to uncover enough diagnostic materials to adequately assign components of sites to specific prehistoric cultures. The mound sites were described only as Woodland manifestations, estimated to date from ca. 500 B.C. to A.D. 1000. The UND report is the most intense study of the Devils Lake region yet done. However, it concentrated only on survey and site recordation, with no archaeological testing or excavations conducted. This means that absolute dates from excavated contexts for cultural complexes in the project area are not available.

Since the 1975 UND survey, several smaller scale cultural resource inventories have been conducted in the Devils Lake area. These include work done by Woolworth (1978), Dill (1977, 1979), Dahlberg et al. (1983), Kinney et al. (1983), Withrow (1983), and Loendorf (1985). These surveys were done in direct response to proposed impacts from highway construction, powerlines, and additional flood control projects.

Several cultural resources overviews of the Devils Lake region have been written from existing records, with no accompanying field work. These include Holland and Klosterman (1977), Schneider (1977), Vehik and Vehik (1977), North Dakota Public Service Commission (1978a, 1978b, 1978c), North Dakota Legislative Council Regional Environmental Assessment Program (REAP) (1979a, 1979b), U.S. Army Corps of Engineers (1981), Franke (1982), and North Dakota Legislative Council (n.d.).

There have only been limited archaeological excavations conducted in the Devils Lake area in recent times. R. Fox and O'Brien (1979) tested areas of proposed improvements

within the Sully's Hill Game Preserve, including work at the Sully's Hill observation tower, storage building, office building, and related utility areas. This preliminary testing uncovered both prehistoric and historic cultural materials, and the report of the investigations recommended that mitigation efforts be performed in the future. This led to the eventual excavation of 32BE208, the Irvin Nelson site (S. Fox 1979, 1982). This is the only site in the Devils Lake area to be fully excavated.

The earliest occupation identified at site 32BE208 was called a Middle Woodland component by S. Fox (1982). He suggested the convergence of Archaic and Woodland traits in this horizon, rather than any deviation from the Hopewellian cultural sphere found in the Upper Mississippi River Valley. Diagnostic projectile points from this zone included Hanna corner-notched, Pelican Lake corner-notched, Besant side-notched, and Avonlea variants, which were all classified as Late Plains Archaic forms. One point similar to McKean, and one Oxbox point, may represent occupations which pre-date the Middle Woodland context. Ceramics from this level appear to have affinities with styles known from Minnesota. Plain and trailed sherds predominated, followed by a number of cord roughened ceramics. The pottery was thought to be similar to Fox Lake ware and the Laurel complex.

The second horizon at site 32BE208 was identified by S. Fox (1982) at a Late Woodland zone. This level indicated that the site's inhabitants participated in a broader interaction sphere, with influences from the Middle Missouri area, Minnesota, and perhaps cultures from southern Canada noted. These people exploited a wide range of lacustrine and terrestrial resources, with a concentration on deer and elk. Projectile points from this horizon included Avonlea side-notched, corner-notched, and Middle Missouri small triangular forms. Ceramics varied, but two major types were identified. The majority, representing some 66% of the sherds collected, were Middle Missouri-like, with a strong correlation to the Terminal Middle Missouri variant. The next major group appeared similar to Sandy Lake ware.

Lacking in S. Fox's work at site 32BE208 were absolute dates from the defined cultural zones, which would allow for the placement of the recovered materials within a specific temporal framework. Also missing from his text were provenience and depth data, which would allow other scholars the opportunity to sort out spatial relationships between artifacts and the cultural horizons identified during the excavations. As the only modern archaeological excavation project in the Devils Lake area, the site report by S. Fox (1979, 1982) offer several hypotheses which could be tested by future studies.

Historical investigations of the Devils Lake area have been more limited than the previous archaeological studies. One major regional overview has been produced (Schweigert 1977). As part of the cultural resources survey of the Central North Dakota Section of the Garrison Diversion Unit, conducted by UND, Kurt Schweigert performed a separate inventory of historic sites in the Devils Lake region in 1975-1976. Fifty-six resources were recorded which were thought to have historical or architectural significance. Seven of these sites were recommended as eligible for nomination to the NRHP. In addition, Schweigert identified 280 sites of historic interest which he believed were not significant and which were not recorded during the UND field work. The recorded sites included two military/exploration sites, eight town sites, 35 homestead sites, two transportation related sites, three industrial sites, one stage station, one school, one religious site, one unknown site, and two natural features. Other historical surveys in the region include Esca-Tech Corporation (1980) and Vyzralek (1985). No historical sites in the project vicinity have been archaeologically tested or excavated.

3.0 ENVIRONMENTAL BACKGROUND

The following section will detail the physical setting of the Devils Lake study area including general physiography, soils, geology and geomorphology. The Paleo-ecology of the region will be discussed, as well as modern climate, flora and fauna.

3.1 GENERAL PHYSIOGRAPHY

The project area is located in northeastern North Dakota and lies within the Drift Prairie physiographic province of the Central Lowlands ecological zone (Figure 3). The Central Lowlands is a botanical term referring to the area covered by tall grass prior to settlement, as opposed to the short grass Great Plains region in the western part of the North Dakota (Bluemle 1977). The Drift Prairie covers most of the eastern part of the state, and lies between the Red River Valley physiographic region on the east and the Missouri Coteau on the west. Poor drainage and low relief is characteristic of the area. The Drift Prairie is drained by the James, Sheyenne, Souris, and Pembina Rivers and includes the Devils Lake interior drainage basin.

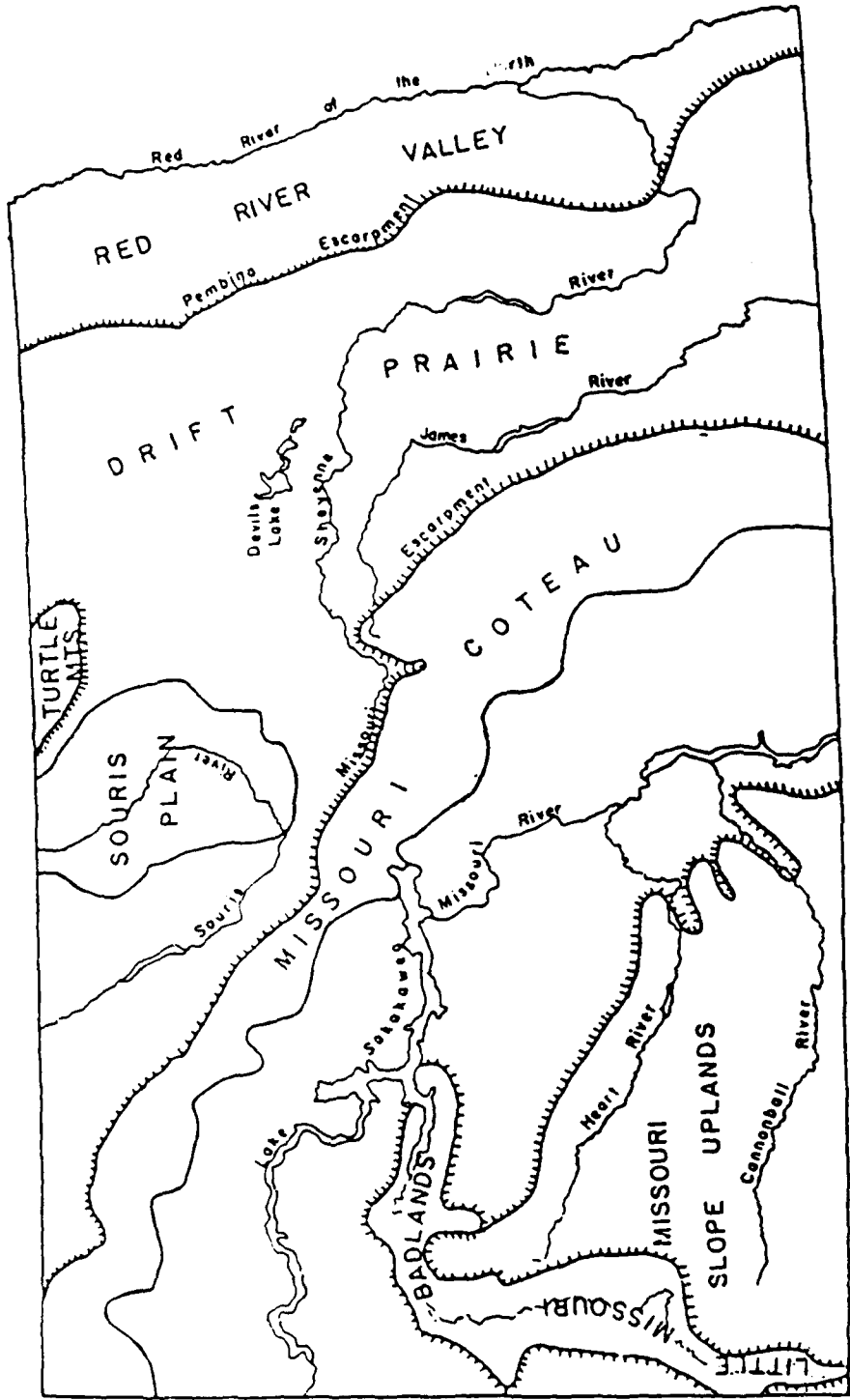
The proposed flood control project is within the Devils Lake Basin. This interior drainage basin covers an area of 10,000 sq. km, or 3,900 sq. mi (Callender 1968). The project also extends southward to the Sheyenne River Valley. The Sheyenne River heads in the north-central part of the state, near Harvey, North Dakota, and drains to the southeast, emptying into the Red River near Fargo.

Surficial deposits within the Devils Lake Basin consist primarily of glacial drift and post-glacial lacustrine sediment, along with minor amounts of Pierre shale. The Pierre shale is late Cretaceous in age and is found in outcrops along the Sheyenne River Valley and on Sully's Hill. It is assigned to the Odanah Member and correlates to the Verendrye member in east-central South Dakota (Gill and Cobban 1965; Callender 1968). The Odanah member consists primarily of hard, grey siliceous shale. Pierre shale is found within much of the surface glacial deposits and underlies all the drift deposits in the Devils Lake area (Simpson 1979).

Late Pleistocene glacial drift covers nearly the entire Devils Lake project area. The glacial till is composed predominantly of Pierre shale and Paleozoic limestone which can be found northward in Manitoba. Outwash is composed of Pierre shale or mixed shale, limestone and granite fragments. The drift ranges in thickness between 3 and 120 m but is commonly 30 to 60 m in depth (Paulson and Akin 1964; Callender 1968). It was most likely deposited during the Mankato sub-age of the Wisconsin Late Pleistocene times.

Devils Lake Flood Control Project

Figure 3



PHYSIOGRAPHIC REGIONS OF NORTH DAKOTA

(From Schneider 1982a:39)



Post glacial deposits consist of lacustrine silts, clays, sands and gravels deposited in and around the Devils Lake-Stump Lake complex (Callender 1968). Also of post-Pleistocene age are the recent river alluvium found in the Sheyenne River Valley, consisting of silt and fine sand and known as the Walsh Group (Bluemler 1977, 1965).

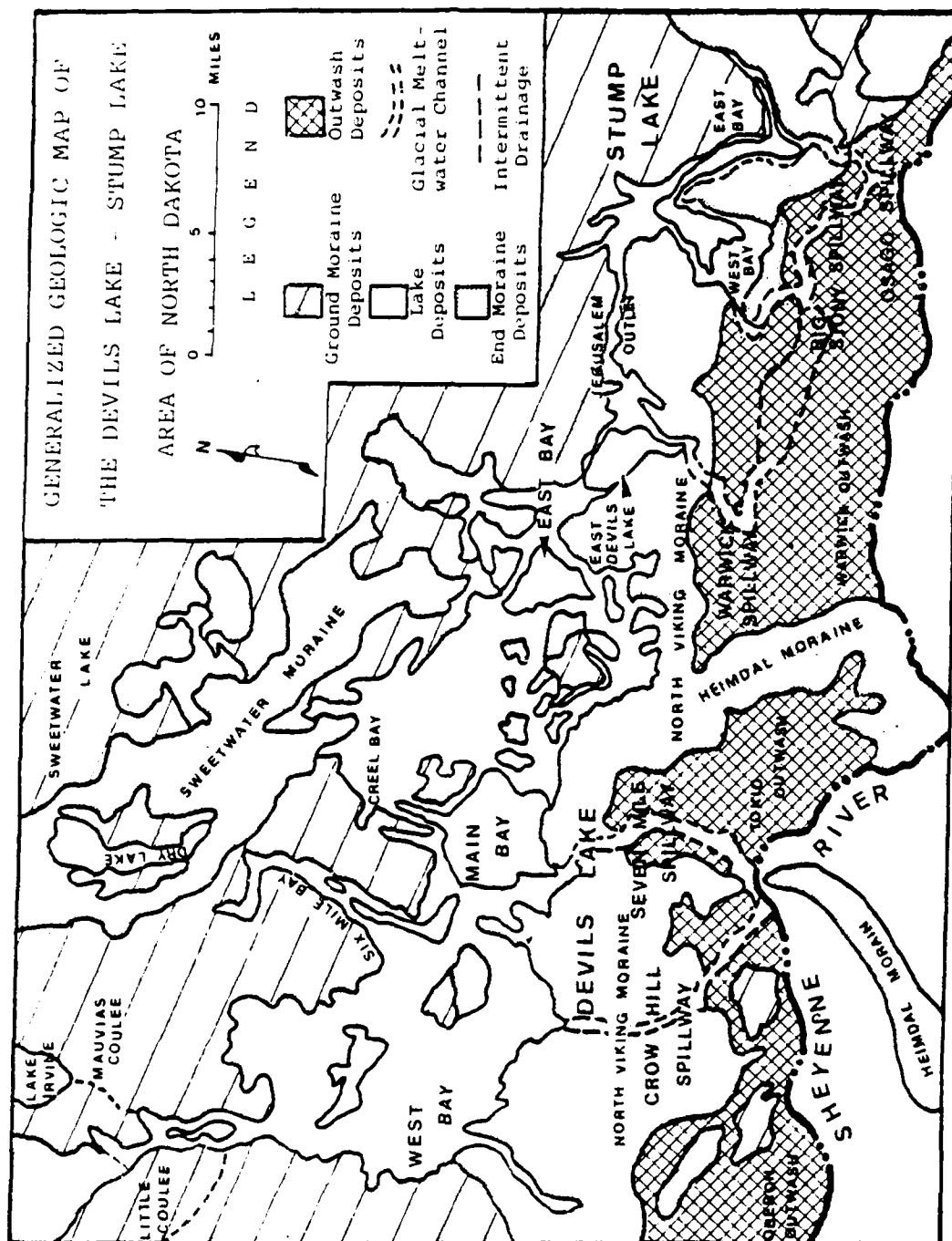
During the Ordovician, Jurassic and Cretaceous periods, when the area was covered by a shallow sea, the underlying geology of the project area was formed. The modern landscape of the Devils Lake Basin was basically shaped during the Pleistocene when glacial action eroded or buried the early topography. The main glacial landforms present within the Devils Lake area are shown in Figure 4. The glacial landforms consist of end moraines, ground moraines behind the end moraines, and outwash deposits distal to the end moraines. The North Viking and Heimdal end moraines are well defined and represent significant still stands of the ice margin and are believed to be recessional moraines of the Late Mankato Leeds lobe in eastern North Dakota. These end moraines are characterized by classic "knob and kettle" rolling terrain of gently rounded hills and depressions. The Sweetwater end moraine is not as well developed and may represent either a minor still-stand, or the remnant of a larger end moraine overridden by a subsequent ice advance (Aronow 1963).

The ground moraine within the Devils Lake area is characterized by gently rolling topography which is marked by a series of linear and sub-parallel ridges, seen plainly on air photographs but are more inconspicuous on the ground. These features are termed washboard moraines and occur most abundantly north of Devils Lake and west of Minnewaukan. The pattern of the washboard moraine is generally northwest. The origin of these features are related to deposition subglacially at the base of thrust planes in the ice (Elson 1957; Callender 1968).

The eskers and kames of Benson and Eddy Counties were formed by water flowing through or beneath the Pleistocene glaciers, leaving elongated or cone shaped deposits of sands and gravels. The most recognizable of these features is Devils Heart, a kame that rises some 200 ft above the plain near Tokio. Most of these topographic features are outside of the present study area.

Large outwash plains are found distal to the end moraines. The Tokio outwash was probably deposited from the position of the Heimdal moraine. The other outwash deposits are related to the North Viking moraine. The outwash plains are generally of low relief and relatively flat.

Numerous large glacial spillways (melt water channels or outwash channels) traverse the area between the North Viking Moraine and the Sheyenne River. All are entrenched into the



Devils Lake Flood Control Project
Figure 4

moraine deposits and outwash deposits south of the moraine. Their age is interpreted as younger than the outwash, and in some cases, younger than the North Viking Moraine. Many are quite large and deeply entrenched from the enormous volumes of meltwater carried.

The Sheyenne River in the project area is a small stream within a much larger valley. The part of the valley in which the stream flows is a flat-bottomed, steep-sided trench. Terraces flank the trench for much of its length and these are often truncated by the walls of the trench. The Sheyenne River Valley was the last geological features formed in the area. It is well below, and not graded to, the bottoms of the meltwater spillways. Thus, the erosion of the trench was controlled by events outside the immediate region.

The Sheyenne River Valley in the project area averages half a mile in width and 75 ft in depth. It is cut into the Pierre Shale which outcrops in numerous places along the trench. The cutting of this river valley related to the drainage of glacial Lake Souris, after the retreat of the ice from the Heimdal Moraine to the North Viking Moraine. Prior to this retreat Lake Souris drained through the James River Valley (Aronow 1963).

3.2 SOILS

The general soil descriptions for the project area were abstracted from Omodt et al. (1968), while more specific soil determination, for areas surveyed, came from the U.S. Department of Agriculture, Soil Conservation Service (1977, 1979, 1986, n.d.). Most of the project area is covered by thick black soils and some limy soils of the subhumid grasslands. These soils are of glacial origin. They were developed on glacial till and moraine deposits. Glacial parent material also resulted in soils of the outwash plains and lacustrine lakes.

The majority of the area consists of level to gently sloping soils with thick black surface layers, called chernozems, and some associated limy subsoils, termed calcium carbonate solonchak. Other subsoils include clay pan, called solonetz, and wet soils, referred to as humic gley and planosols. The major surface soils in the region include the Barnes-Glyndon, Barnes-Hamerly, Barnes-Svea and Svea-Hamerly loams and clay loams. Sandy loams and loams with sandy substrata include the Hecla-Hamar soils. The Brantford and Renshaw-Divide soils are sandy loams with gravelly and sandy substrata.

Soils in the rolling plains consist of chernozem and associated sloping soils with thin surface layers, called regosols. This includes the Barnes-Buse loams.

Also present in the project area are nearly level to undulating limy soils or soils with calcium carbonate solonchak. Associated with them are chernozem, planosols, and saline soils, referred to as solono chak. The Hamerly-Sevea-Tetonka series of soils are found in these areas, which are clay loams and loamy soils.

3.3 GEOLOGY

The section below will discuss the geomorphic development of the Devils Lake project area in terms of pre-Pleistocene geology, Pleistocene geology, and Holocene geology.

3.3.1 Pre-Pleistocene Geology

The geology of the Devils Lake area before the series of glacial advances which characterized the Pleistocene consisted of several sequences of shallow marine sediment being laid down dipping westward (Larson 1986). The Pleistocene drainage system was dominated by deep stream valleys, up to 60 to 90 m in depth. The valleys were eroded into the Pierre Shale formation of Cretaceous age (135 to 65 million years before present).

Bluemler (1983) states that the buried pre-glacial valley system drained to the southeast, as indicated by analysis of bore hole logs and more detailed mapping of subsurface topographic features. This is in contrast to earlier beliefs. Bluemler (1973) wrote that the pre-glacial drainage of the Nelson County-Walsh County area flowed generally eastward and northeastward. Pre-glacial drainage in Benson and Pierce Counties was said to be northeastward (Carlson and Freers 1975). In Eddy and Foster Counties (Bluemler 1965) it was noted as southeastward. Larson (1986) states that other studies imply a northward drainage pattern for the region prior to the Pleistocene.

The deepest and most prominent pre-glacial valley trends from northern Ramsey County south-southeast beneath present day East Devils Lake (Bluemler 1983). Devils Lake is directly over a buried secondary channel with the West Bay of Devils Lake and Stump Lake both over tertiary channels of the buried pre-glacial valley (Larson 1986). The filling of these valleys and their subsequent setting probably had a direct influence on the formation of the lakes and the interior drainage basin as they exist today.

3.3.2 Pleistocene Geology

Geologic deposits overlying the bedrock formations in the Devils Lake region represent several episodes of glaciation during the Pleistocene. The history of the depositional sequence prior to the last advance, labelled the Wisconsin, is obscure due to a lack of detailed lithostratigraphic units. Pre-Wisconsin deposits consist of five till units with interbedded lacustrine deposits. The lacustrine deposits indicate ancient meltwater lakes. Bedrock valleys are filled with till, fluvial deposits and lacustrine deposits. The earliest glacial deposits in North Dakota are pre-Wisconsin in age. In the Devils Lake area the Tiber formation was deposited by an ice lobe extending from the Red River Basin. Underneath this deposit are 100 m of pre-Wisconsin till in some areas. Following the ice retreat, weathering produced an oxidized soil zone. The next glacial advance deposited the Vang formation. It consists of sandy till with crystalline rock pebbles. The sandy soil developed on this surface indicates a weathering episode.

The Napoleon Glaciation in early Wisconsin times resulted in deposition of the Gardar formation. Following this ice advance was a period of extensive weathering and erosion, with deep soils laid down and valleys cut.

The next glaciation over the Devils Lake region occurred approximately 22,000 B.P. (ca. 20,050 B.C.). This advance, termed the Lostwood Glaciation, extended to Iowa times. The retreat of the Lostwood ice sheet exposed vast windswept unvegetated areas. The subsequent silt deposition over the area is related to the Mallard Island member of the Oahe formation (Moran et al. 1978; Larson 1986). The Lostwood glacier that crossed the area consisted of two lobes, the James and the Des Moines. By the time the ice had retreated as far as east-central North Dakota these lobes had lost their identities. The Leeds and Souris lobes developed from the receding James lobe when the Turtle Mountains changed the flow of the thinner ice (Bluemle 1965).

A series of distinct glacial phases can be identified in and around the Devils Lake region from late Wisconsin times outward. The earliest is the Buchanan phase, when ice covered the entire project area. Landforms from this phase are found to the south of the project area, in Stutsman County. The next ice retreat and still-stand, resulting in a pronounced end moraine development, is termed the Grace City phase. Drift from this phase covers the western two-thirds of Foster county, southwestern Eddy county and parts of Wells and Stutsman Counties. Continued ice retreat was followed by the Kensal phase. Drift from the Kensal phase covers the eastern portion of Foster County, northeastern Strutsman and parts of Griggs and Barnes Counties. This phase occurred southeast of

the Devils Lake project area, which was still under ice for the most part during that time.

The next substantial glacial stand occurred during the McHenry-Heindal-Cooperstown phase. Drift from the McHenry and Heindal end moraines apparently were simultaneously deposited. Kensal ice was wasting as these ice fronts attained their maximum. The Cooperstown moraine may have been deposited about the same time (Bluemle 1965). McHenry moraine lies west of the project area and the Cooperstown moraine to the southeast. The Heindal moraine is one of the major end moraine features discussed in the project area.

Bluemle (1965) has separated the McHenry and Heindal end moraines and suggested they joined at Sully's Hill on the south shore of Devils Lake. Aronow (1963) discusses only the Heindal moraine and has evidently lumped the moraines deposited at about the same period of time. The Heindal advance is identified as a recessional moraine of the Leeds lobe of Late Mankato age. The Heindal and Tokio outwash deposits are associated with the stand of the Heindal moraine (Figure 4). These outwash deposits are now separated by the Sheyenne River Valley, but at one time they were graded and continuous. Meltwater from the Heindal ice front passed the Tokio and Heindal outwash channels into the glacial James River to the south, prior to the formation of the Sheyenne River trench.

As the Leeds lobe continued to retreat, it readvanced or remained in the position of the North Viking moraine and is termed by Bluemle the North Viking phase. The Seven-mile Spillway, south of Main Bay of Devils Lake, was initially formed during the retreat of the ice from the Heindal moraine. The ice may have retreated as far as the northern edge of Sweetwater Lake and then re-advanced to the North Viking Moraine (Callender 1968). The Oberon, Warwick, and Pekin outwash plains were then deposited distal to the North Viking ice front. The meltwater deposit in these outwash plains drained to the east by way of a channel ancestral to the present valley of the Sheyenne River.

Meltwater channels formed during the retreat of the ice front from the North Viking moraine include the Long Lake, Crow Hill, Seven-Mile, Warwick, Big Stony, Osage and Harrisburg spillways. Seven-Mile spillway may have formed earlier, but it was again full of water during this time. They all were entrenched into the outwash deposits south of the North Viking moraine, or into the moraine itself, which indicates they are later than the deposition of the outwash, and in some cases later than the moraine. These spillways have been truncated by and hang above the trench of the Sheyenne River Valley (Aronow 1963).

The Sweetwater moraine north of the North Viking may represent a smaller, insignificant stand of the ice as it continued to retreat northward. Or, it may be an older moraine overridden by the ice which created the North Viking moraine further to the south (Aronow 1963; Callender 1968).

The modern Devils Lake-Stump Lake complex occupies the site of a pre-glacial river valley which was partly filled by glacial drift deposited in Pleistocene times. The valley presumably had steep-sided walls which allowed setting of the sediments to form a basin. Melting of the ice front as it retreated produced large volumes of water which were blocked by the North Viking Moraine. Damming of this meltwater resulted in the formation of pro-glacial Devils Lake whose dimensions were approximately 50 mi (80.5 km) east-west and eight miles (12.8 km) north-south (Callender 1968). Water draining from pro-glacial Devils Lake eroded ground moraine and cut a shoreline scarp south of East Devils Lake and Stump Lake.

The last major Pleistocene event in the Devils Lake area was the formation of the Sheyenne River. The cutting of this trench beneath the levels of the outwash spillways and terraces along the valley occurred to allow for the drainage of large amounts of water from glacial Lake Souris to the northwest. Most of the water from Lake Souris flowed through the James River Valley before the Sheyenne River was created when the Lake Souris drainage was diverted into the trench of the Pembina River. During this time water continued to flow into the Sheyenne River along the Warwick and Big Stony spillways (Aronow 1963).

3.3.3 Holocene Geology

The Oahe formation was deposited during the Holocene, and covers the entire Devils Lake region. It varies from half a meter to a meter in depth. It is, in all areas, the uppermost lithostratigraphic unit (Larson 1986).

As the glaciers receded northward into Canada, North Dakota was revegetated during a period of cool, moister climates. A spruce-aspen forest developed over much of the area. Geologically, the lower Aggie Brown member of the Oahe formation was deposited. Approximately 10,000 B.P. the climate became slightly warmer and vegetation became much like that of today, with a spreading grassland. The upper Aggie Brown member of the Oahe formation was deposited in this period.

Middle Holocene times (8500 to 4500 B.P.) was characterized by a dust-bowl like environment, as a result of warm, dry weather. Wind erosion caused deposition of loess and

accumulation of dunes. The Pick City member of the Oahe formation was deposited at this time.

During the Late Holocene the Riverdale member of the Oahe formation was deposited. It was a cooler and more moist period, when compared to the Middle Holocene.

3.3.3.1 Holocene Development of the Devils Lake Basin

North of Devils Lake, the basin is drained by three intermittent principal streams, Sweetwater Inlet, Mauvais Coulee and Little Coulee. Most of the water drains south into Devils Lake. When levels of water are high enough, Devils Lake drains into Stump Lake by way of the Jerusalem Outlet. If Stump Lake overflows, it drains by way of Big Stony spillway to the Sheyenne River. The entire Devils Lake Basin is closed to exterior drainage until Stump Lake reaches an elevation of 1,459 ft amsl. Throughout the Holocene, the Devils Lake area has been a large evaporative basin (Larson 1986).

The highest strand lines of Devils Lake are at elevations of 1,453 and 1,445 ft. The upper strandline is at the base of a wave-cut bench in glacial till. The bench encircles both Devils and Stump Lakes indicating a time when high water levels were maintained and both lakes were connected. Big Stony spillway is the outlet for this lake, but has carried water only a few times, if at all, during the Holocene (Aronow 1957; Larson 1986). The lower strand line is correlated to the Jerusalem Outlet at the eastern end of Devils Lake. Neither outlet has been very active since Pleistocene times.

Beaches around Devils Lake below, intermediate to and possibly higher than the two major strand lines can be determined. However, lake levels were never sustained long enough for significant beach development at these other elevations. A number of different shorelines have existed. The lower the shoreline, the more saline the water. At low lake levels, fresh water was restricted to springs at the south end of Stump Lake and other lakes in the basin fed by ground water, which then in turn have external drainages into Devils Lake or Stump Lake. Salts dissolved from glacial debris and bedrock are contained in lower areas as evaporite deposits, or in basin sediments between lithic grains (Larson 1986).

3.3.3.2 Modern History of Devils Lake

According to Callendar (1967) the water level of Devil's Lake rose, with minor fluctuations, from about A.D. 1450 to ca. 1800, when the water level began a steady decline until it reached the lowest historical level in 1942. Engstrom's (1987) evidence indicates that there had been three or four

major oscillations in lake levels during the two to three centuries prior to European settlement in about 1880. He states, however, that except for a short time in the 1700s, the lake has been shallow and saline much of the time. As illustrated in Figure 5, the shoreline of the lake retracted from an elevation of 1,434 ft amsl in 1882, to 1,413 ft in 1928, to a low of 1,402 ft in 1942. In 1883 Devils Lake was 35 ft deep and covered an estimated 60,000 acres over a series of four interconnected bays 24 miles long and seven miles wide, with 180 miles of shoreline. By 1940 the lake had contracted to two large ponds, not more than three feet deep, surrounded by alkaline flats. The lake then rose from 1940 to 1951, declined from 1951 to 1969, when the water level was at an elevation of 1,412 ft, and has been on the rise again from 1969 to the present (Schweigert 1977). See also Wiche et al. (1986) for a comprehensive discussion of the hydrologic history of the Devils Lake basin in the 1900s.

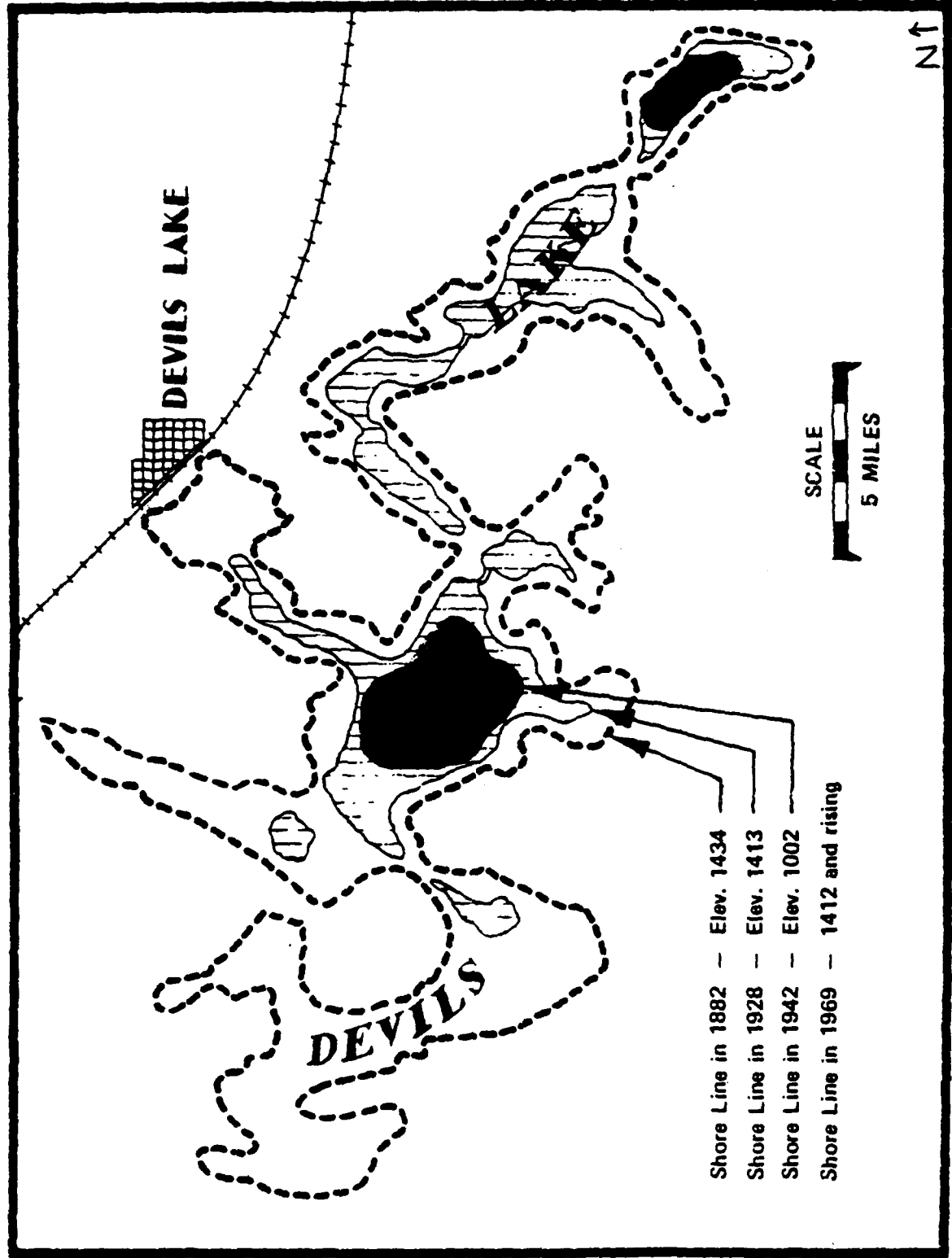
3.4 PALEO-ECOLOGY OF THE DEVILS LAKE REGION

While paleo-climates during the late Pleistocene and early Holocene were briefly mentioned above, under the discussion of regional geology, the paleo-ecology of the project area is more fully described below. The overall paleo-climate for western North Dakota has been summarized by Gregg (1985) and is illustrated in Figure 6. The text below borrows from Gregg's summary, but adds data from studies of the Devils Lake Basin and correlates climatic episodes with cultural stages.

In the Devils Lake area at the end of the Pleistocene the Leeds ice lobe retreated northward. The project area was then bounded on the east by glacial Lake Agassiz and on the west by glacial Lake Souris. About 9000 B.C. a spruce dominated boreal forest spread out along the former glacial terminal moraine, extending across eastern North Dakota up to the remains of the ice sheet in Canada. A conifer-hardwood forest sprung up to the south. Western North Dakota was covered by grasslands at that time (Bryson et al. 1970; Wendland 1978). By 8000 B.C. the conifer-hardwood forest was reduced by the expansion of the western grasslands. These grasslands, which would have presented a lush and stable environment for a wide range of fauna to utilize, eventually covered eastern North Dakota and the Devils Lake region by about 7000 B.C. The Leonard paleosols of the Aggie Brown member of the Oahe formation were deposited at that time (Gregg 1985). The Sheyenne River was then fully established in its modern valley. Culturally, this occurred during the Paleo-Indian period.

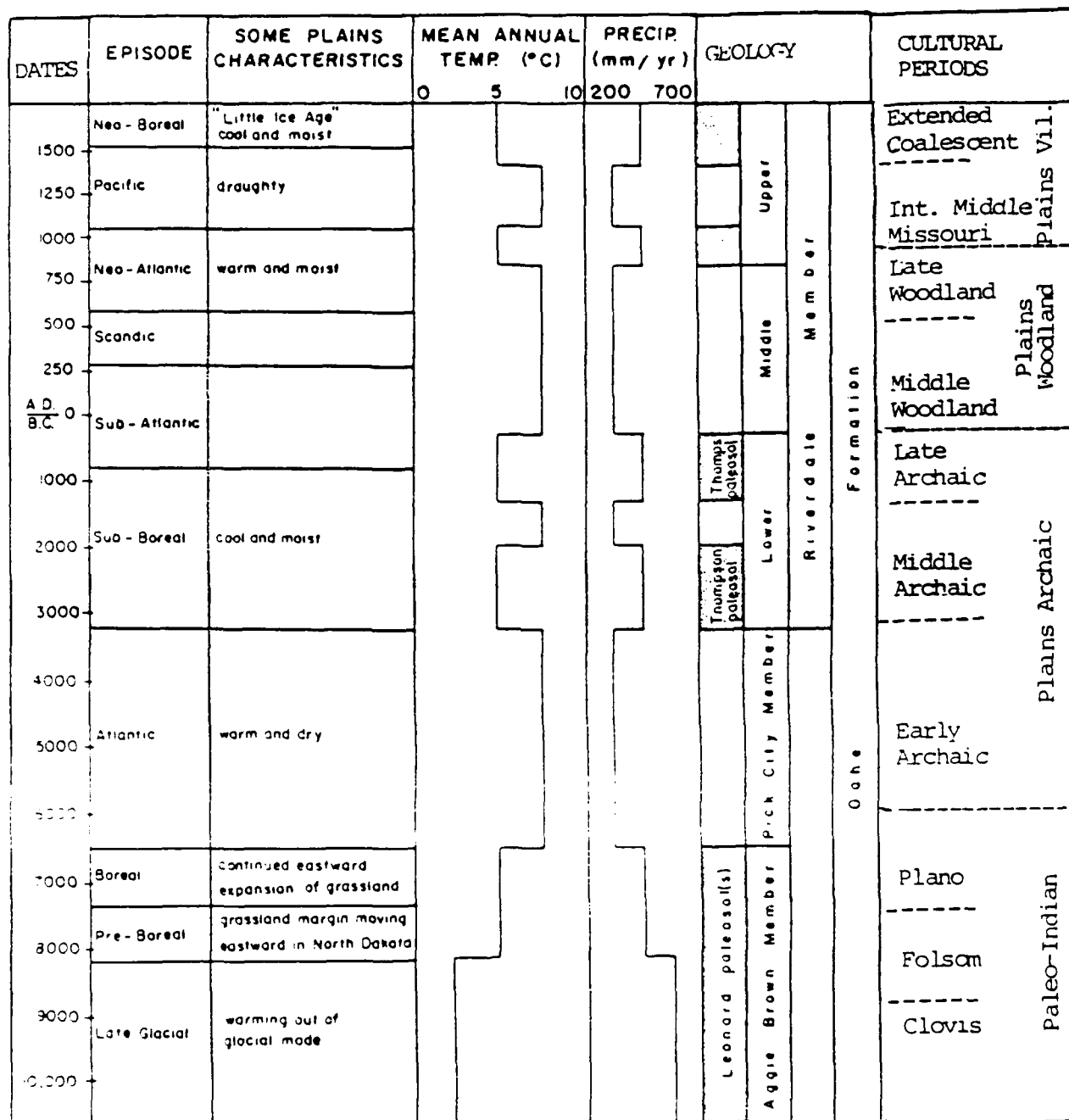
Figure 5

DEVILS LAKE 1882-1969 SHORE LINE



Devils Lake Flood Control Project

Figure 6



HOLOCENE CLIMATES IN NORTH DAKOTA
(Adapted from Gregg 1985:6)

The period from about 6500 B.C. to 3000 B.C. was characterized by the Atlantic climatic episode (Bryson et al. 1970), which corresponds to Antev's (1955) Altithermal. By that time the project area's transition to prairie grassland was complete. This was an interval of warm temperatures and lower moisture. It was probably not a situation of one long continuous drought, but it was relatively arid. Benedict and Olson (1978), from their work in the Colorado mountains, suggest that the Altithermal consisted of two major short droughts, one between about 7000 to 6500 B.P. (ca. 5050 B.C. to 4550 B.C.) and another from 6000 B.P. to 5500 B.P. (ca. 4050 B.C. to 3550 B.C.), which resulted in reduced human population densities on the eastern Great Plains. Culturally, this can be correlated with Frison's (1978) Early Plains Archaic period, dated from about 6000 B.C. to 3000 B.C. At this time windblown sediments of the Pick City member of the Oahe formation were deposited in North Dakota (Gregg 1985).

During portions of the Atlantic episode Devils Lake and Stump Lake were desiccated (Aronow 1957; Callender 1968). Fluctuations in lake elevations, reflecting changing microenvironmental conditions, characterized this time. The xeric period lasted until about 4000 B.P. (ca. 2050 B.C.) in the Devils Lake region. Callender (1968) noted that lake levels rose around 6000 B.P. (4050 B.C.), reaching their maximum elevation about 5000 B.P. (3050 B.C.). Lake levels then declined to a low water stage about 4700 B.P. (2750 B.C.), followed by a rise in elevation culminating around 4300 B.P. (2350 B.C.).

The Sub-Boreal climatic phase followed the Atlantic. This episode witnessed increased precipitation and decreases in temperatures. The Thompson paleosol was laid down at this time in North Dakota, indicating landform stabilization, and an enhanced environment for floral and faunal resources (Gregg 1985). Concurrent with this episode was the McKean cultural complex of Frison's (1978) Middle Plains Archaic period, dated between about 3000 and 1000 B.C., which was characterized by increasing human populations on the Great Plains.

Within the Devils Lake Basin, Aronow (1957) noted a rise in lake levels following the Atlantic episode which he correlated to between 3000 and 2400 B.P. (1050 B.C. to 450 B.C.). He observed accumulations of sand and gravel deposits containing buried soils on the south end of Main Bay of Devils Lake dating to this time. Callender (1968) also determined that Devils Lake rose around 3500 B.P. (1550 B.C.), resulting in the formation of a lacustrine environment. The water in the lake then dropped around 3000 B.P. and rose again about 2500 B.P. (ca. 550 B.C.). Lake levels stayed high until about 1300 B.P. (ca. A.D. 650), with a minor decline about 1800 B.P. (ca. A.D. 150).

The Sub-Atlantic and Scandic climatic phases are not well known on the Great Plains. Indications of weather fluctuations are present. During this period the Riverdale member of the Oahe formation was deposited. No definite paleosols can be found in the Oahe formation dating to these episodes, suggesting a general lack of climatic and landform stability (Gregg 1985). These episodes can be associated with the Late Plains Archaic cultural period (Frison 1978), from about 1000 B.C. to A.D. 500, which is noted for an increase in the number of archaeological sites in North Dakota, related to the exploitation of a more diverse range of natural resources. Arid climatic conditions at the beginning of the Late Plains Archaic may have led to the decline of the McKean complex and its replacement by the Pelican Lake culture on the Northwestern Plains (Gregg 1985).

The Neo-Atlantic episode is generally characterized by a warmer and moister climate. Land surfaces stabilized and humic horizons developed, as represented in paleosols found in the Riverdale member of the Oahe formation in North Dakota (Clayton et al. 1976). Gregg (1985) suggests that this episode presented favorable conditions for horticulture. It corresponds, culturally, with the appearance of the Woodland tradition on the Northeastern Plains between about A.D. 500 and A.D. 1000, and the emergence of the Plains Village tradition in the Middle Missouri area.

The beginning of the Pacific climatic episode is thought to have been a period of drought on the Great Plains. Archaeologically, sites from this time in North Dakota are sometimes found covered by sterile windblown silt (Gregg 1985). Syms (1977) noted that during the Pacific I episode, characterized by a reduction of rainfall and an expansion of the grassland environment between about A.D. 1200 and 1450, the geographic distribution of the Blackduck horizon was reduced and shifted eastward, and the Extended variant of the Middle Missouri culture was restricted. From about A.D. 1450 to 1550, during the Pacific II episode, climatic conditions returned to those similar to the present, with the Coalescent tradition blossoming in the Middle Missouri area, and a number of burial mound complexes and different ceramic cultures appearing on the Northeastern Plains. The succeeding Neo-Boreal episode, from about A.D. 1550 to 1850, was characterized by cool summers and cold autumns, with extensive alpine glaciation resulting in its nickname of the "Little Ice Age." Culturally, this episode can be associated with the end of the Late Prehistoric period.

According to Callender (1968) the level of Devils Lake fell ten feet from about A.D. 750 to 950. It then rose 14 ft in the next century, before declining again. Callender used sedimentological studies of the salinity and sulphate levels of the lake to arrive at these conclusions. They show broad agreement with Aronow's earlier investigation. Aronow (1957)

observed that Devils Lake once again was in decline between ca. A.D. 1300 and 1535. It reached its lowest level around A.D. 1450 (Callender 1968). Burr oak grew on the dry floor of Stump Lake at that time. When the level of Stump Lake subsequently rose, these trees were submerged. The rise in lake elevation corresponded to a wetter climate period noted in Europe between about A.D. 1440 and 1850 (Aronow 1957). Since A.D. 1850 lake levels have fallen, with some fluctuations which were previously mentioned above in Section 3.3.3.2.

Obviously, climatic patterns have affected fluctuations in the levels of Devils Lake and Stump Lake over time. The effects of these fluctuations should be discernable in the archaeological record of the area, as sites are located and dated. Rising water levels should not have adversely effected human populations in the region, but decreased lake levels and increased salinity could have negatively impacted cultural habitation. The comparison of the intensity of prehistoric occupations in the Devils Lake Basin with the model of lake levels developed by Aronow (1957) and Callender (1968), correlated with the general climatic episodes discussed by Gregg (1985), must await further archaeological studies of sites in the project area.

3.5 MODERN CLIMATE

The following summary of modern climate is from the U.S. Department of Agriculture, Soil Conservation Service (1986 1979). The Devils Lake region is very cold in winter when Arctic air frequently covers the area. The average winter temperature is eight degrees Fahrenheit (F) and the average daily minimum is -2 degrees F. Snowfall in winter is not heavy and winds blow much of the ground free of snow and create large drifts.

The average seasonal snowfall is 37 inches. The greatest depth of snow on record in the area is 33 inches. On average, at least one inch of snow is on the ground for 44 days of the year; but the number varies greatly from year to year.

Most precipitation falls during periods of warm weather and is heaviest in spring and early summer. Of the total annual precipitation, 13 inches (72%) falls between April and September. Two years out of ten seasonal rainfall is less than 11 inches. About 25 thunderstorms occur each year, 20 of which are in the summer. The average temperature for the project area is 66 degrees F. and the average daily maximum is 80 degrees F.

The average relative humidity in mid-afternoon is about 60%, while at dawn it is 81% and at night it is always higher. The percentage of possible sunshine in summer is 70%, while in

winter it falls to 50%. The prevailing wind direction is from the southwest. April has the highest average windspeed at 12 miles per hour.

3.6 MODERN FLORA

Two basic vegetative eco-zones have been noted for the Devils Lake project area. Around the lakes is found an Oak Savanna, while the surrounding plains is dominated by a Wheatgrass-Bluestem-Needlegrass floral environment. The major plant species identified for these two eco-zones are given below, as taken from a publication of the U.S. Department of the Interior, Bureau of Land Management (1978), which summarized Kuchler (1964).

3.6.1 Oak Savanna

The physiognomy of this eco-zone is tall grass prairie with broadleaf deciduous trees scattered about or found in groves. It is dominated by big bluestem (Andropogon gerardi), little bluestem (Andropogon scoparius), and bur oak (Quercus macrocarpa). Other components of this eco-zone include prairie sandreed (Calamovilfa longigolia), Amphicarpa Bracteata, Carya ovata, Comandra richardsina, Euphorbia corollata, Fraxinus pennsylvanica, horsemint (Monarda fistulosa), Panicum leiberghii, Quercus alba, Q. ellipsoidalis, Q. relutia, wild rose (Rosa spp.), indiangrass (Sorghastrum nutans) dropseed (Sporobolus heterolepis), and porcupine grass (Stipa spartea).

3.6.2 Wheatgrass-Bluestem-Needlegrass

This eco-zone is dominated by western wheatgrass (Agropyron smithii), big bluestem (Andropogon gerardi) and needlegrass (Stipa viridula). It is characterized by a physiognomy of dense, medium to tall grass prairie. Other floral species found in this eco-zone include slender wheatgrass (Agropyron trachycaulum), little bluestem (Andropogon scoparius), sand sage (Artemisia frigida), cudweed sage (A. ludoviciana), aster (Aster ericoides), sideoats grama (Bouteloua curtipedula), blue grama (B. gracilis), black sampson (Echinacea angustifolia), prairie junegrass (Koeleria cristata), dotted gayfeather (Liatris punctata), silverleaf scurfpea (Psoralea argophylla), rose (Rosa arkansana), Missouri goldenrod (Solidago missouriensis), and needleandthread grass (Stipa comata).

3.7 MODERN FAUNA

The animals which inhabit the Devils Lake region have been summarized by S. Fox (1982). In terms of prehistoric human subsistence, the most important species for big game hunting was the American bison (Bison bison), which roamed the area in large herds until historic times. Other large terrestrial game animals in the region include elk (Cervus elaphus) and white tail deer (Odocoileus virginianus). Small mammals include eastern cottontail (Sylvilagus floridanus), black-tailed prairie dog (Cynomys ludovicianus), thirteen-lined ground squirrel (Spermophilus tridecemlineatus), raccoon (Procyon lotor) and striped skunk (Mephitis mephitis). Predators which live in the area include red fox (Vulpes vulpes) and coyote (Canis latrans). The lakes and rivers in the region provide a wetlands environment suited to beaver (Castor canadensis), ermine (Mustela erminea), weasel (Mustela frenata), muskrat (Ondatra zibethicus) and mink (Mustela vison). It should be noted that the Devils Lake Basin, including Devils Lake and Stump Lake, provides important habitat for migrating waterfowl. These include Canada goose (Branta canadensis), snow goose (Chen caerulescens), wood duck (Aix sponsa), pintail duck (Anas acuta), black duck (Anas rubripes), and mallard (Anas platyrhynchos). Prior to the stocking of the lakes with sport fishing species, the fish population of Devils Lake included northern pike (Esox lucius) and perch (Percidae, spp.).

4.0 CULTURAL OVERVIEW

It is evident from the discussion of previous archaeological and historical studies of the project area, cited in Section 2.0 of this report, that the culture history of the Devils Lake region is still poorly known. This is in part due to the fact that most of the preceding investigations have been non-systematic surveys, with little excavation conducted. The 1975 work by UND is the only intensive reconnaissance of the area, and it emphasized site location and recordation. Most of the surveys done to date have concentrated on the shores of Devils Lake and Stump Lake, with some work performed along the Sheyenne River. Thus, the routes of the proposed Corps channel alternatives are relatively unexplored, while the upstream lakes area has never been archaeologically investigated.

The following cultural overview will discuss the resources of the project area within prehistoric and historic narratives. The prehistoric discussion will focus on what is known about aboriginal settlement and subsistence patterns, while the historic narrative will discuss Euro-American trends and events.

4.1 PREHISTORY

None of the previous surveys in the Devils Lake project area recovered enough prehistoric diagnostic artifacts to facilitate the placement of sites within a regional cultural framework. Other than Montgomery's (1906) early work, the testing of the Irvin Nelson (32BE201) site is the only well documented excavation in the project vicinity. No radiocarbon dates were produced from site 32BE201 (S. Fox 1982), and therefore no sites in the Devils Lake area have yielded absolute temporal data.

The Devils Lake Basin is within the Northeastern Plains cultural sphere, as defined by Wedel (1961). Lacking specific temporal information for the project area, the following discussion of prehistory will borrow from adjacent regions. Cultural frameworks have previously been developed for the Souris River Valley (R. Fox 1982; Floodman et al. 1985; Floodman 1986) west of the project area, the James River Valley (Schneider 1982b) to the southeast, the Middle Missouri Valley (Lehmer 1971) to the southwest, southern Manitoba (MacNeish 1958; Syms 1977) to the north, and the Northwestern Plains (Frison 1978; Reeves 1983) to the west. This overview basically follows the periods outlined in publications about the archaeology of the region produced by the U.S. Department of the Interior, Bureau of Land Management (Gregg 1985), the U.S. Department of Agriculture, Forest Service (Beckes and Keyser 1983), and the State of North Dakota (Snortland-Coles n.d.). The cultural stages discussed below include: the

Paleo-Indian tradition (ca. 10,000-6000 B.C), Plains Archaic tradition (ca. 6000 B.C. - A.D. 1), Plains Woodland tradition (ca. A.D. 1-1780), Plains Village tradition (ca. A.D. 1000-1862), and Late Prehistoric Nomadic tradition (ca. A.D. 500-1862). This is graphically illustrated on Figure 7.

4.1.1 The Paleo-Indian Tradition

The term "Paleo-Indian" was coined by Wormington (1957), to refer to the earliest defined aboriginal cultures in North America. It corresponds to Mulloy's (1958) Early Prehistoric period for the Northwestern Plains. Willey (1966) has characterized it as a generalized "Big Game Hunting" tradition, adapted to the grassland environment of the Pleistocene. Technology was based upon large lanceolate-shaped spear points used to hunt megafauna. Most scholars tend to discuss the Paleo-Indian tradition in terms of the Clovis, Folsom, and Plano cultural periods (eg. Jennings 1968).

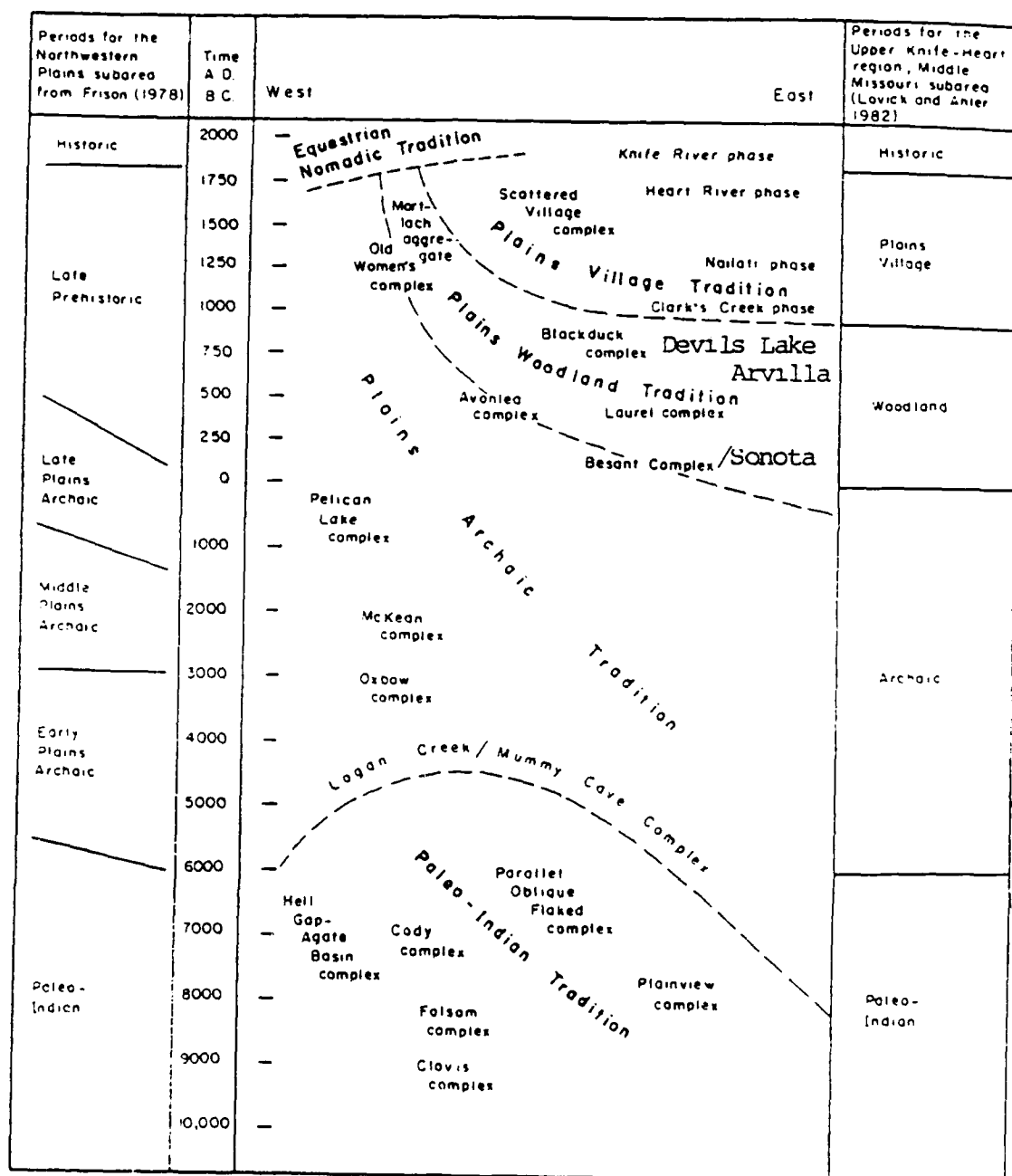
4.1.1.1 Clovis Period

The antiquity of man in North America is still being debated, but the earliest well accepted culture on the Great Plains is classified as Clovis, based upon the recovery of distinctive long lanceolate points with concave bases and central fluting, first defined from work near Clovis, New Mexico. Clovis points are often found associated with kills of extinct forms of megafauna, including mammoth, camel and bison. At the Dent site in northeastern Colorado Clovis points associated with mammoth remains were radiocarbon dated to 9250 B.C. (Wormington 1957; Willey 1966; Frison 1978). No Clovis artifacts have come from an excavated site in North Dakota, but Schneider (1982a) mentions that perhaps five specimens are known to have been collected in the state, including a couple from the Moe site near New Town, along Lake Sakakawea in Mountrail County.

4.1.1.2 Folsom Period

Following Clovis is the Folsom period, defined by a point type which is smaller, wider at the midsection, with longer flutes. The Folsom people were primarily interested in hunting now extinct forms of bison, after the recession of the last glaciation. At the Lindenmeier site in northeastern Colorado, Folsom points were recovered in association with a bison kill, radiocarbon dated to ca. 8900 B.C. A number of Folsom points have been found in North Dakota, with Schneider (1982a) reporting 45 known specimens, including several from the Moe site. Again, none came from an excavated context.

CULTURAL-CHRONOLOGICAL MODEL FOR THE NORTHERN PLAINS
(From Gregg 1985:80)



Devils Lake Flood Control Project
Figure 7

4.1.1.3 Plano Period

The last Paleo-Indian period includes a number of different cultures distinguished by various non-fluted lanceolate point types, including Agate Basin, Hell Gap, Alberta, the Cody complex, and parallel-oblique flaked forms. In Wyoming, the Brewster site yielded a radiocarbon date of 8040 B.C. for the Agate Basin level, while Hell Gap has been dated to 7700 B.C. at the Casper site, and the Cody occupation at the Horner site was dated to 6890 B.C. (Frison 1978). Points from the Plano period are the most numerous Paleo-Indian artifacts known in North Dakota (Schneider 1982a). The first excavated and dated Paleo-Indian occupation in the state was recently reported and can be assigned to the Plano culture. At the Benz site, in the Knife River quarries area of Dunn County, a broken Scottsbluff point and a reworked Alberta point were recovered with associated lithic tools and bone, radiocarbon dated between 8910 ± 70 B.P. and 8002 ± 78 B.P. (ca. 7030-5974 B.C.) (Schneider 1984).

The likelihood of discovering Paleo-Indian sites in the Devils Lake region is considered low. Most (almost 90%) of the Paleo-Indian materials known in North Dakota have been found west of the Missouri Coteau (Schneider 1982a). Richard Johnson, who resides near Tolley, North Dakota, along the upper Souris River, has several Paleo-Indian artifacts in his collection, including examples of Clovis, Folsom, Eden, and Agate Basin styles, most of which probably came from the New Town area. Thad Hecker collected Paleo-Indian artifacts in the Souris River Basin, which were accessioned by the SHSND in 1942 (Floodman et al. 1985). Schneider (1982a) listed four isolated Paleo finds from the Sheyenne River Valley south of Devils Lake. Dahlberg et al. (1983) reported a possible fluted point from a private collector near Sheyenne, North Dakota.

The paucity of Paleo-Indian sites in eastern North Dakota can be explained through an examination of the environmental history of the state (see Section 2.0). This is especially true in understanding the lack of pre-Plano artifacts, with Schneider (1982a) citing only one example of a fluted point documented east of the Missouri River Valley. Central North Dakota was covered by glacial ice prior to 13,000 B.P. (ca. 11,050 B.C.) and by a spruce-aspen forest between about 13,000 and 10,000 B.P. (ca. 8050 B.C.). Only after about 8000 B.C., when the prairie grasslands spread from the west, did the Devils Lake region become a favorable environment for the grazing of large herbivores which Paleo-Indian people preferred to hunt. At the same time glacial Lake Souris bounded the project area on the west and glacial Lake Agassiz bounded it on the east, and these large bodies of water would have been a deterrent to human settlement until they receded northward into Canada. Pettipas (1985), in his recent survey of Paleo-Indian archaeology in

Manitoba, noted that the earliest projectile point forms found in the province were Plano types, similar to the Horner style, dating to the Campbell subphase of the recession of Lake Agassiz, ca. 8000 B.C. Larson (1986), in his geomorphological study of the Devils Lake area, did not think it possible for human habitation of the region to pre-date 11,500 B.P. (ca. 9550 B.C.), the approximate time of the last glacial retreat.

4.1.2 The Archaic Tradition

Both Willey (1966) and Frison (1978) use the Plains Archaic stage to reflect the transition of prehistoric human groups on the Great Plains to a more diversified hunting and gathering economy after the megafauna became extinct at the end of the Pleistocene. Projectile points appear as smaller forms with hafting notches for use as darts with an atlatl. Bison were still hunted, but smaller game were also utilized. The presence of ground stone tools and rock lined fire hearths at this time argue for the gathering, processing and cooking of wild plants and seeds. Reeves (1983) includes the Archaic tradition within his Middle Prehistoric period for the Northwestern Plains.

4.1.2.1 Early Plains Archaic Period

The Early Plains Archaic period, dated by Frison (1978) from about 6000 to 3000 B.C., is thought to correspond to the arid climatic episode which Antevs (1955) described as the Altithermal. Some scholars (Mulloy 1958) believed there was a cultural hiatus on the Great Plains at this time, while other archaeologists (Reeves 1973) argue against this, and still others offer the theory of the occupation of specific refuge areas during the Altithermal (Benedict and Olson 1978; Buchner 1980). Reeves discusses the Altithermal as part of his Early Middle Prehistoric I period.

Early Plains Archaic cultures on the Northern Plains include the Logan Creek/Mummy Cave complex and the Oxbow complex. At the type site in northwestern Wyoming the Mummy Cave complex was radiocarbon dated between about 5680 and 3440 B.C. (Wedel et al.) The Itasca bison kill in western Minnesota is an example of a Early Archaic site found on the Northeastern Plains (Shay 1971). In western North Dakota the Tysver-Olson site in the Killdeer Mountains of Dunn County yielded Logan Creek/Mummy Cave complex materials radiocarbon dated between 5345 ± 110 and 4985 ± 100 B.P. (ca. 3505-2935 B.C.) (Kuehn 1984).

The Oxbow complex, dated at the type site in southeastern Saskatchewan to 3250 B.C. (Nero and McCorquodale 1958), is considered to be a relatively late Early Archaic culture.

Reeves (1973) believes that early Oxbow components resemble the Mummy Cave complex, while later Oxbow sites, dated between about 2500 and 2000 B.C., show an affinity to the McKean complex. Oxbow points were recovered from site 32BE208 in the Devils Lake area, but S. Fox (1982) lumped them into his "Middle Woodland" horizon.

4.1.2.2 Middle Plains Archaic Period

Frison (1978) believes the appearance of the McKean complex, including the McKean, Duncan, and Hanna point styles, marks the beginning of the Middle Plains Archaic period, dated from about 3000 to 500 B.C. Reeves (1973) fits this within his Early Middle Prehistoric II period for the Northwestern Plains. In southeastern Manitoba, McNeish (1958) used the discovery of McKean materials at the Lockport and Cemetery Point sites to define a cultural complex called the Whiteshell focus, dated from about 3000 to 1500 B.C. Middle Plains Archaic sites are relatively common in western North Dakota, especially in the Little Missouri Badlands (Beckes and Keyser 1983), and Frison (1978) postulates a population increase on the Great Plains at that time. At the Red Fox site, on Spring Creek in Bowman County, southwestern North Dakota, at least four McKean occupations were defined, with a radiocarbon date of 1820 B.C. obtained from a level containing Duncan points (Keyser 1982).

4.1.2.3 Late Plains Archaic Period

In Frison's (1978) Late Plains Archaic period, dated from about 1600 B.C. to A.D. 700, the McKean complex was replaced by a new technology, referred to as the Pelican Lake phase, characterized by a corner-notched projectile point style, first defined at the Mortlach site in Saskatchewan (Wettlaufer 1955). It is Reeves' (1983) contention that Pelican Lake, which he dates from about 1700 B.C. to A.D. 400, was an outgrowth of the McKean complex, and should be considered a phase within the general indigenous Northwestern Plains Tunaxa cultural tradition. He places it, along with Besant, within his Late Middle Prehistoric period.

Post-dating the Pelican Lake levels at Mortlach, a culture called Besant was identified (Wettlaufer 1955). Frison (1978) describes Besant as a sophisticated bison hunting complex, typified by a distinctive side-notched projectile point style. It is Reeves' (1983) opinion that the Besant phase, which he dates from approximately 500 B.C. to A.D. 800, evolved from the Oxbow complex and spread westward from the Northeastern periphery of the plains as part of the Napikwa cultural tradition. Both Pelican Lake and Besant sites are numerous in western North Dakota (Beckes and Keyser 1983),

leading Gregg (1985) to speculate about increasing population densities in the area.

Vehik and Vehik (1977) reported an absence of Archaic sites in the Sheyenne River Valley. More recently, however, Haury and Schneider (1986) recorded six sites in the Sheyenne River drainage which can be assigned to the Archaic tradition on the basis of projectile point typology. The James River Valley of North Dakota also contained a few sites dating to the Middle and Late Archaic periods. A burial at Pipestone Reservoir, on a tributary of the James, has been radiocarbon dated to 1592 ± 70 B.C., which would place it within Archaic times and make it the oldest absolute dated burial yet found in the state (Fox and Person 1978). In the Devils Lake area, S. Fox (1982) found McKean complex and Pelican Lake phase materials at site 32BE208 which he included in his "Middle Woodland" component.

4.1.3 The Woodland Tradition

On the Northeastern Plains the Late Archaic period overlaps with the Woodland tradition. Gregg (1985) has pointed out that there may be little difference between Plains Archaic and Plains Woodland subsistence economies in North Dakota. In eastern North America an Early Woodland period has been defined, based on the introduction of pottery, horticulture, burial mounds, and special trade items, dating from about 1000 to 100 B.C. No Early Woodland sites are known in North Dakota.

4.1.3.1 Middle Plains Woodland Period

For the Northeastern Plains, including eastern North Dakota, early ceramic sites can be placed within the Middle Woodland period. This corresponds with the zenith of the Hopewellian culture in the Mississippi River Valley (Snortland-Coles n.d.). Besides pottery, which tend to be thick conical vessels, other Middle Woodland traits include burial mounds, atlatl dart points similar to Pelican Lake and Besant forms, and the presence of exotic materials such as marine shell and copper. Cultural complexes associated with the Middle Plains Woodland period on the Northeastern Plains include Laurel and Sonota. For the James River Valley, Schneider (1982b) grouped all Middle Plains Woodland sites into his Period 1.

The Laurel composite was the expression of the Middle Woodland period in the boreal forest region of the Upper Great Lakes, dated from about 100 B.C. to A.D. 1100 (Syms 1977). In southeastern Manitoba, McNeish (1958) associated pottery with the Anderson focus, which he estimated to date from about 500 B.C. to A.D. 500 based on its similarities with Hopewellian styles. This was followed by the Nutimik focus, supposedly

dating from about A.D. 500 to 1000, which showed affinities with the Besant phase.

In the Middle Missouri region Neuman (1975) has defined a burial mound complex which he calls Sonota. There has been some debate concerning the relationship between Sonota and Besant. Reeves (1983) thinks that Sonota should be subsumed within the Besant phase on the Northwestern Plains. Based on the recovery of pottery with Besant points at open occupation camp sites like High Butte (Wood and Johnson 1973) and Abraxas (Floodman et al. 1983) in western North Dakota, it has been suggested by Johnson (1977) that Besant should be considered a phase within the general Plains Woodland cultural tradition. High Butte, which is located on the south side of the Missouri River in Mercer County, was radiocarbon dated to A.D. 350, while the Besant component at the Abraxas site, which was found in the Little Missouri Badlands of McKenzie County, dated from ca. 91 B.C. to A.D. 60. A Sonota-like complex, consisting of two burial mounds and a campsite, was excavated by the SHSND in 1982 near Jamestown, North Dakota. One mound was radiocarbon dated to A.D. 440 while the other dated to about A.D. 750 (Snortland-Coles 1985).

Middle Plains Woodland components have been found at two sites in the James River Valley. The earliest component at the Naze site, 32SN246, was radiocarbon dated to 85 ± 70 B.C., with projectile points which suggested an affiliation with the Sonota complex. At the Beeber site, 32LM235, ceramics similar to the Laurel composite were found (Schneider 1982b). Along the Sheyenne River, Hauray and Schneider (1986) recently recorded 13 Woodland sites, of which four could be assigned to the Middle Plains Woodland period on the basis of projectile point typology and ceramic style. At Devil Lake, S. Fox (1982) identified a Middle Plains Woodland level at site 32BE208. While projectile points from this horizon seemed similar to Archaic forms, the ceramics suggested affinities with Fox Lake ware from Minnesota and the Laurel composite.

4.1.3.2 Late Plains Woodland Period

The Late Plains Woodland period on the Northeastern Plains is characterized by the appearance of the bow and arrow, evidence of horticulture, a change to a more sedentary lifeway, and increased complexity in social organization. The conical vessel of the Middle Woodland period was replaced by the growing popularity of globular vessels and manufacturing evolved from coiling to paddle and anvil and molding techniques. Mississippian influences are visible in ceramic decoration at the beginning of this period, but Plains Village styles are noted at the end. This era can be correlated with Schneider's (1982b) Period 2 in the James River Valley. The

Late Woodland period is estimated to date from ca. A.D. 1000-1700.

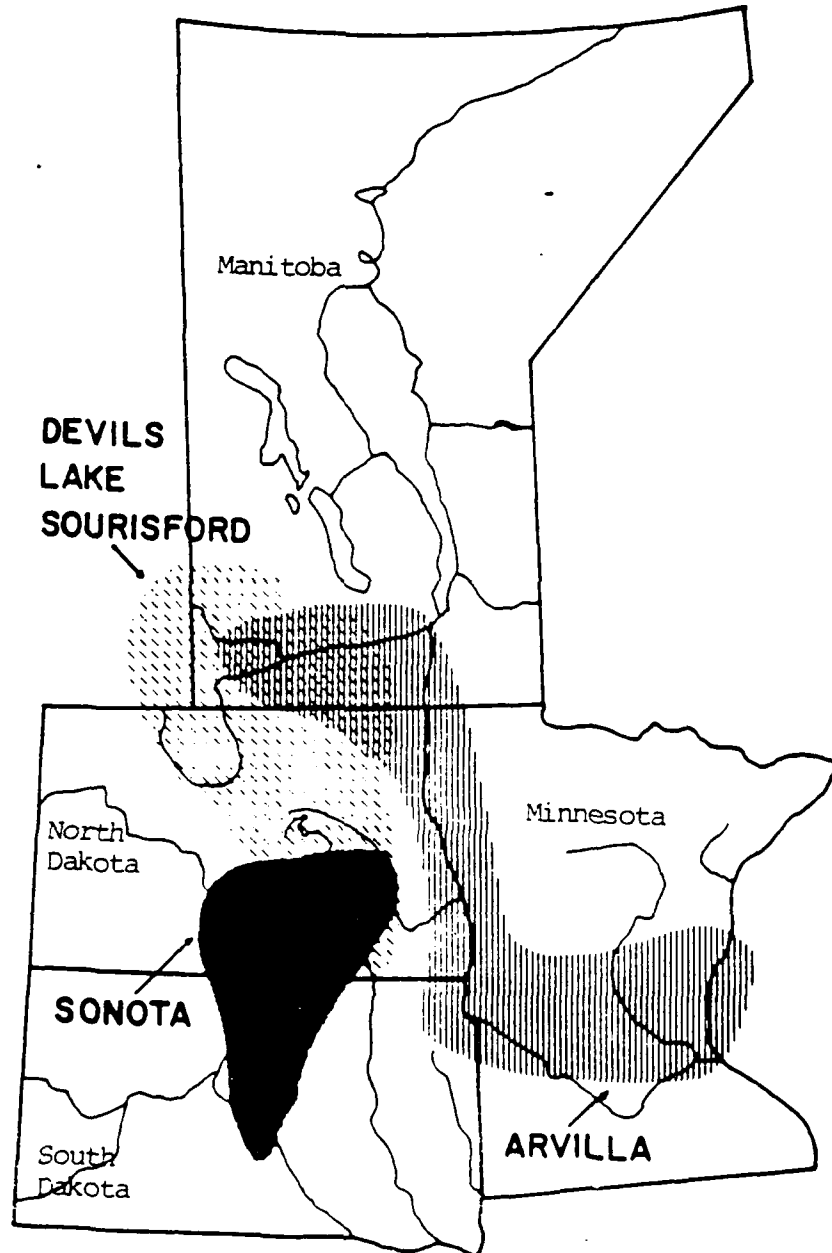
The Sonota complex continued into the Late Plains Woodland period, but other burial mound cultures also appeared on the Northeastern Plains. One of these, called the Arvilla complex, dating from around A.D. 600 to 1400, is known from sites found in eastern North Dakota, northeastern South Dakota, and Minnesota, especially concentrated in the Red River Valley (Syms 1982). The complex consists of linear and circular mounds containing subsoil pits with flexed and disarticulated primary and secondary burials, frequent use of ochre, Prairie Side-Notched projectile points, and associated utilitarian and ornamental grave goods, including St. Croix and Blackduck ceramics (Johnson 1973).

Another burial mound culture in the project area vicinity is named the Devils Lake-Sourisford complex, dating from about A.D. 1000 to 1600, and extending from southern Manitoba and southeastern Saskatchewan into northeastern North Dakota (Syms 1977). This complex is distinguished by burial mounds with conical pits, and exotic items such as smooth-surfaced miniature vessels, large conch shell gorgets, tubular stone pipes, columella shell beads, and incised stone tablets. The differences and similarities between the Arvilla complex and the Devils Lake-Sourisford complex have been discussed by Syms (1982). Figure 8 illustrates the geographic relationships between various burial mound groups of the Late Woodland period on the Northeastern Plains.

A number of different ceramic cultures coexisted with the mound builders during Late Woodland times. St. Croix stamped ware appeared in northwestern Wisconsin, Minnesota, northeastern South Dakota and eastern North Dakota between about A.D. 500 to 800 (Anfinson 1979). Defined on the basis of pottery, the Blackduck horizon spread over Ontario, Manitoba, and Minnesota between about A.D. 500 and 1700 (Syms 1977). McNeish (1958) puts Blackduck within his Manitoba focus. Blackduck ceramics have been found as far west as Billings County, North Dakota (Campbell et al. 1983). Sandy Lake ware has been dated from about A.D. 1000 to 1700 in Minnesota, and it is commonly found in the Red River Valley (Michlovic 1983). Cambria ware is best known from southwestern Minnesota, where it has been dated between A.D. 900 and 1350.

Most of the mounds in eastern North Dakota have yet to be definitely assigned to a specific culture. In the James River Valley site 32SN403 produced a vessel similar to the Devils Lake-Sourisford complex ware. Late Woodland components were also identified at sites 32SN207, 32SN246 (Naze site), 32SN247 (Kischenmann site), 32LM235 (Beeber site), and 32LM240 (Chappel site), in the James River Valley, which had ceramics resembling St. Croix, Blackduck and Sandy Lake wares (Snortland-Coles n.d.; Schneider 1982b). Sandy Lake people

GEOGRAPHICAL BOUNDARIES OF THE SONOTA, ARVILLA,
AND DEVILS LAKE-SOURISFORD BURIAL MOUND COMPLEXES
(From Snortland-Coles n.d.)



Devils Lake Flood Control Project
Figure 8

probably did not travel as far west as the Souris River Valley, as originally postulated by R. Fox (1982), but there is some evidence for a possible Blackduck occupation there (Floodman et al. 1985). In the Sheyenne River Valley, south of the project area, Haurey and Schneider (1986) recorded two sites with Late Woodland components and three additional sites which can be placed in either the Middle or Late Woodland periods.

An extensive Late Woodland component was identified at site 32BE208 at Devils Lake. Ceramics were noted as Sandy Lake ware and a Middle Missouri variant. Fox (1980) seemed to overlap the Late Woodland period with the Plains Village tradition, which hints at relationships between these cultures, or may indicate a lack of vertical control during the excavations at 32BE208.

4.1.4 The Plains Village Tradition

The Plains Village tradition appeared in the Middle Missouri region around A.D. 900. It was characterized by semi-permanent villages, earthlodge architecture, domestic agriculture, distinctive ceramic wares, small projectile points used with a bow and arrow, and evidence for the extensive utilization of bison. Lehmer (1971) divided the Plains Village pattern into the Middle Missouri and Coalescent cultures. Recent research indicates that the Plains Village pattern spread as far up the Missouri as eastern Montana, and also influenced settlement along the James River Valley in eastern North Dakota.

4.1.4.1 Middle Missouri Cultures

The first Plains Village cultures are referred to by Lehmer (1971) as the Initial and Extended variants of the Middle Missouri tradition. Most Initial Middle Missouri variant sites are found between the Chamberlain and Cheyenne Rivers in South Dakota, and date between about A.D. 950 and 1300. Village size varied, but usually numbered 20 to 30 houses. The earthlodge houses of the Initial Middle Missouri were rectangular, often found with cache pits. Initial Middle Missouri pottery is usually cord roughened, with flat lips.

The Extended Middle Missouri variant dates from about A.D. 1100 and 1550, with a gap between A.D. 1250 and 1450. It has a more northerly distribution than the Initial Middle variant, with Extended Middle Missouri sites stretching from just below the mouth of the Little Missouri River in North Dakota to the Bad-Cheyenne region of South Dakota. It is suspected that the Extended Middle Missouri variant developed in North Dakota, perhaps out of the same parent stock as the Initial Middle Missouri people, and then pushed south.

Fortifications at contemporary Initial and Extended Middle Missouri sites suggest that there may have been conflicts between the two groups. The Extended Middle Missouri variant is distinguished by simple stamped pottery with flared or S shaped rims. Fort Yates ware, indicative of an Extended Middle Missouri occupation, has been found as far northeast as the Pembina River Valley (Joyes 1969). Lovick and Ahler (1982) have identified the Clark's Creek phase (ca. A.D. 1100-1200) and the Nailati phase (ca. A.D. 1200-1400) as manifestations of the Extended Middle Missouri variant in the Knife-Heart region of North Dakota.

The Terminal Middle Missouri variant flourished between about A.D. 1550 and 1675, with sites concentrated in the Cannonball and Knife-Heart region of North Dakota. It is distinguished by large villages, strongly fortified, rectangular earthlodges, pottery similar to Extended Middle Missouri styles, and the occasional presence of a distinctive thin, wide, full-grooved axe (Lehmer 1971). Fox (1982) felt that much of the ceramics found in the upper component of site 32BE208 at Devils Lake resembled Terminal Middle Missouri forms.

4.1.4.2 Coalescent Cultures

Lehmer (1971) discussed the Coalescent tradition also in terms of Initial and Extended variants. The Initial Coalescent variant appeared between A.D. 1400 and 1500, with sites concentrated in the Big Bend region of the Missouri River Valley in South Dakota. The Extended Coalescent variant probably evolved from the Initial Coalescent, and expressed itself throughout South Dakota in the period from A.D. 1550 to 1675. Coalescent villages vary in size, with most being small clusters of houses. Earthlodges tend to be round, with central firepits and four support posts. Coalescent pottery is distinctive, with sparse temper, compact paste, thin walls, and variation of lip shapes, with cord roughened exteriors being replaced by simple stamping and check stamping over time. Whereas a high percentage of lithic artifacts in Middle Missouri tradition sites are made of Knife River flint, this material is rarer in Coalescent assemblages where chalcedony, jasper, chert, quartzite and quartz predominate. Nollmeyer is an example of a Extended Coalescent variant site found as far northwest as Sidney, Montana (Johnson 1982).

In the Middle Missouri region Lehmer (1971) terms the aboriginal cultures after the entrance of Euro-Americans onto the Great Plains as the Post-Contact Coalescent variant. There were two major concentrations of sites along the Upper Missouri River Valley in this period. One cluster is from the White River to the Grand River in South Dakota, and another is in the Knife-Heart region of North Dakota, dating between A.D. 1675 and 1780. Village size and plans vary for this

variant, but the houses tended to have a central firepit and four posts, in a form similar to the Coalescent tradition. Pottery was like Middle Missouri tradition styles. The most distinctive trait of this period is the presence of Euro-American trade items, such as glass beads and metal implements. From sites near modern Bismarck, Lehmer (1971) identified the Heart River phase, while Post-Contact Coalescent components around the mouth of the Knife River have been classified by Lovick and Ahler (1982) as part of the Scattered Village complex, dated from ca. A.D. 1400 to 1700.

4.1.4.3 Northeast Plains Village Cultures

The origins of the Plains Village pattern is currently being debated. Lehmer (1971) suggested that the Initial Middle Missouri people originated in Minnesota and Iowa, while the Coalescent tradition represented a migration up the Missouri River from the Central Plains. Some researchers are rejecting the migration theory, arguing that Plains Village cultures could have been groups indigenous to the Dakotas who adopted a horticultural way of life (Ahler 1984; Fawcett 1983; Alex 1981). As noted by Snortland-Coles (n.d.), investigations of the Plains Village tradition has centered on the Missouri River trench, while manifestations east of the Missouri are not well understood.

Recent work on the James River have begun to reveal new information about the relationships between the Plains Village tradition and the Woodland tradition. Schneider (1982b) has divided the Plains Village tradition into three cultural periods along the James River. Period 3 is dated from A.D. 1300-1400 and is thought to have some correlations to both the Middle Missouri region as well ceramic cultures found further east. Occupations at six sites are interpreted as part of Period 3: the Quast site, Naze site, Kirschenmann III site, Beeber site, Channel site, Kirschenmann II site, and Schnoker site. Ceramics from Period 3 sites appear similar to Cambria ware from Minnesota and the Extended variant of the Middle Missouri tradition. At the Naze site a radiocarbon date of ca. A.D. 1245 was obtained in association with corn; the oldest date for a cultigen yet found in North Dakota. Schneider's (1982b) Period 4 in the James River Valley includes a component at the Beeber site, surface materials at the Hendrickson II site and the Rode site, and excavated component at Hendrickson III site. The average corrected radiocarbon date for the occupation at Hendrickson III, a fortified earthlodge village, was ca. A.D. 1401. The ceramic assemblage is confusing, sharing attributes with the Middle Missouri region and a number of Northeastern Plains Late Woodland cultures. Much of the pottery appears to resemble the Coalescent tradition from the Middle Missouri area. One vessel was identified as being similar to mortuary wares of the Devils Lake-Sourisford complex.

The final occupation of the James River Valley is called by Schneider (1982b) Period 5, and it extends into historic times since it includes Euro-American trade items. It is not clear whether the trade items post-date the ceramic collection. The ceramics may be related to Period 3 or 4 cultures.

Euro-American trade items are also known for the Blesterfelt site in the lower James River Valley of North Dakota, dated to the mid-1700s (Wood 1971). Wheeler (1963) used ceramic styles, together with the presence of Euro-American trade items, to identify the Stustman focus at sites along the James River, dating to ca. A.D. 1750. Stustman focus sites consist of unfortified semi-permanent villages with small circular earthlodges, together with transitorily camps, which indicate a subsistence economy based on horticulture, hunting and gathering. Syms (1977) believes this culture is related to the Heart River phase of the Post-Contact Coalescent variant.

4.1.5 The Late Prehistoric Nomadic Tradition

Coexisting with the Plains Village tradition of the Middle Missouri region and the Late Woodland tradition of the Northeastern Plains was a nomadic tradition on the Northwestern Plains which both Frison (1978) and Reeves (1983) place within the Late Prehistoric period. For the most part, this was a continuation of an archaic hunting and gathering subsistence pattern, with the addition of bow and arrow technology and the appearance of pottery. Many of these Late Prehistoric cultures have been defined from bison kill sites, such as Vore in Wyoming (Reher and Frison 1980), Bootlegger Trail in Montana (Roll and Deaver 1980), and Old Women's Buffalo Jump in Canada (Forbis 1962). At least one bison kill site has been recorded in the Devils Lake vicinity.

4.1.5.1 Avonlea Phase

The earliest Late Prehistoric culture on the Northwestern Plains is called Avonlea, typified by a small triangular side-notched projectile point described by Kehoe and McCorquodale (1961). Reeves (1983) views Avonlea as a phase related to Pelican Lake, representing a continuation of the Tunaxa cultural tradition. He dates it from ca. A.D. 200 to 700, and noted that in the Northeastern Plains it was replaced by the Blackduck horizon. Ceramics, such as those from the Goheen site in Montana (Fraley and Johnson 1981), are now well documented for the Avonlea culture. A component of the Evans site in western North Dakota (Schneider and Kinney 1978) has been assigned to the Avonlea phase. The presence of Avonlea-like points at Initial Middle Missouri sites indicates contact between the nomadic inhabitants of the Northwestern Plains and the more settled village people of the Missouri River Valley.

4.1.5.2 Old Women's Phase

Few differences can be noted between Late Prehistoric projectile points and those found at Late Woodland or Plains Village sites, since all of these cultures utilized small side and corner notched styles adapted for use with the bow and arrow. Kehoe (1966) has produced a cultural chronology for Northwest Plains Late Prehistoric projectile points. At the Gull Lake site in Saskatchewan, the Avonlea culture was succeeded by Prairie Side-Notched points around A.D. 730, which was in turn replaced by Plains Side-Notched forms at about A.D. 1300 (Kehoe 1973). Reeves (1983b) referred to the last culture at the Head-Smashed-In buffalo jump in Alberta as the Old Women's phase, dated from ca. A.D. 850 to 1800, characterized by small side-notched arrow points. Gregg (1985) lumps both Prairie Side-Notched and Plains Side-Notched point forms within the Old Women's phase for western and central North Dakota, and noted that ceramics associated with this culture appear similar to the Late variant of the Saskatchewan Basin complex. Evidence for both Avonlea and Old Women's phase occupations have been recorded in the Souris River Valley of North Dakota (Floodman 1986).

4.1.5.3 Other Late Prehistoric Cultures

Contemporaneous with the Old Women's phase were several ceramic making cultures on the southern Canadian plains. This includes the Selkirk horizon, defined in Saskatchewan from fabric impressed ware; the Saskatchewan Basin sequence, known from the Morkin site; and the Cluny complex. Ceramic bearing components associated with historical Euro-American materials at the Mortlach and Long Creek sites in Saskatchewan, and the Shippee Canyon site in Montana have been grouped together into the Mortlach complex. The Mortlach component at the Morkin site in Alberta was dated to ca. A.D. 1700 (Syms 1977). In Mountrail County, North Dakota, the Evans site had a Mortlach component dated to ca. A.D. 1520.

In the Souris River Valley, just west of the Devils Lake project area, ceramics showed affinities to Plains Village styles from the Middle Missouri, the Blackduck horizon, the Mortlach complex, and other ceramic cultures from the southern Canadian Plains dating to the Late Prehistoric period (Floodman 1986). R. Fox (1982), in his discussion of the Souris River Valley, Schneider (1982b) in his study of the James River Valley, and Michlovic (1983) in his investigation of the Red River Valley, have all argued in support of Syms (1977) Co-Influence Sphere model to explain ceramic variability found at sites in northeastern North Dakota during Late Woodland/Plains Village/Late Prehistoric times (ca. A.D. 1000-1800). Apparently, many different groups utilized this region during the same temporal period, and

there was some sharing of traits indicative of trade and cultural diffusion.

4.1.5.4 Protohistoric Tribes

The end of the Late Prehistoric period blurs with the beginning of the historic era. Many of the tribes in the region had contact with Euro-Americans, and trade items appear in the archaeological record. The introduction of the horse and the gun had wide ranging effects on Plains aboriginal cultures, and the end of the Late Prehistoric period was characterized by rapid change and geographic mobility. It was during this time that tribes known in the historic period begin to be identified from archaeological and archival evidence. For example, Reeves feels the Old Women's phase can be considered the beginning of the Blackfeet tribe. Syms (1982) postulates that the Arvilla complex was protohistoric Algonquian, while the Devils Lake-Sourisford complex was Siouan. He also associated the Blackduck horizon with Algonquian people, while the Selkirk horizon was identified as Cree (Syms 1977). Sandy Lake ware is thought to be associated with the Dakota nation in Minnesota (Johnson 1979). Lehmer (1971) assumed that the Heart River phase of the Post-Contact Coalescent variant represented the protohistoric Mandan and Hidatsa tribes. The Biesterfeldt site has been assigned to the Cheyenne tribe.

4.2 HISTORY

The historic discussion is based mainly on Schweigert (1977). The narrative can be divided into political/economic periods, based on the major historic theme for that time. For the Devils Lake region these themes include the fur trade and early exploration period (ca. A.D. 1738-1865); military and reservation period (ca. 1862-1906); early settlement period (ca. 1882-1900); and the later homesteading period (ca. 1900-1940).

4.2.1 Early Exploration and the Fur Trade

The beginning of the historic era overlaps with the end of Late Prehistoric times, as the first Euro-Americans to visit North Dakota met the tribes which inhabited the region. The primary stimulus for the early exploration of this area by people of European descent was to trade for furs with the natives. What is now North Dakota was once a part of France's New World empire. French expansion out of Canada was mainly a function of fur traders venturing westward. The French trader and explorer Pierre Gaultier de Varennes, the Sieur de la Verendrye, established contact with the Assiniboin tribe at Fort La Reine in southern Manitoba. From there, in 1738,

he was led by the Assiniboin Indians to the villages of the Mandans and Hidatsas on the Missouri River near modern Bismarck. While his route to the Missouri is debated, it appears he crossed from the Pembina River Valley to the Turtle Mountains, north of Devils Lake. In 1742 two sons of La Verendrye made another trip to the Mandans. During their journey they perhaps went as far west as the Big Horn Mountains of Wyoming, while searching for a passage to the legendary "Sea of the West," before returning to Canada (Smith 1980).

With the treaty of the Peace of Paris in 1763 Canada became a British colony and the Missouri River Basin was acquired by Spain. While Spain basically ignored the northern portion of its American holdings, British fur traders were active on the Upper Missouri, spurred by competition between the rival Hudson's Bay Company and the North West Company. In 1893 the Hudson's Bay Company erected Brandon House on the Assiniboine River at the mouth of the Souris River, and a year later the North West Company put up Fort La Souris nearby. From these posts in Canada the traders ventured to the Indian villages on the Missouri. The North West Company trader, Alexander Henry, in 1801, also established a post on the Red River at Pembina (Robinson 1966).

The territory of Louisiana, including the Missouri River Basin, was acquired by the United States of America in 1803. When the American expedition led by Lewis and Clark, sent out to explore this territory, reached the Mandan and Hidatsa villages at the mouth of the Knife River in modern North Dakota in 1804 they were somewhat surprised to find representatives of both the Hudson's Bay Company and the North West Company doing business there (DeVoto 1953).

In 1818 the United States and Great Britain signed a treaty which defined the international border at the 49th parallel. Some of the Canadian traders, such as Robert Dickson, Joseph Rolette, and Joseph Renville, took American citizenship and continued to operate in the region. Dickson had been trading in the Red River Valley under an agreement with the Hudson's Bay Company. One of his employees, Duncan Graham, established a trading post at Devils Lake. In 1822 Joseph Renville helped form the Columbia Fur Company, and by 1826 they also had a post at Devils Lake. The Columbia Fur Company was merged with the American Fur Company in 1827, which continued to have a presence in the Devils Lake region at Fort Rice.

In 1844 Norman Kittson, a trader working for the American Fur Company, moved to Pembina and eventually dominated operations in eastern North Dakota, establishing outposts as far west as the Souris River Valley. Kittson's success hinged on the transport of goods to St. Paul using metis cart. The metis were a distinct ethnic group, of mixed white and Indian blood, who lived in the Red River Valley and traded mainly the

products of their buffalo hunts. The metis sometimes hunted around Devils Lake.

By the 1860s the fur trade on the Upper Missouri was in decline. The Chouteau family, who had taken over the Western Department of the American Fur Company sold out to the Northwestern Fur Company in 1865. This new company for a time continued to operate a post at Devils Lake (Schweigert 1977).

4.2.2 The Military and Indian Reservation

In 1862 the Santee Sioux in Minnesota attacked white settlements and killed several hundred people. In the face of an American military response they fled westward into North Dakota. Troops under Henry Sibley pursued them from Minnesota into the Devils Lake area in 1863, while Albert Sully led another column up the Missouri.

The Sisseton and Wahpeton bands of Santee Sioux had little involvement with the uprising in Minnesota, but were scattered by the military advance, adapting to a nomadic existence in North Dakota. Finally, in 1867 the United States government negotiated a new treaty with them, providing for two reservations, one at the South Dakota side of Lake Traverse and the other at Devils Lake. The Devils Lake reservation was also to include the Cuthead band of Yanktonai Sioux, and an agent was to be appointed when 500 Indians had settled there. This took several years to come to pass.

Also in 1867 the military constructed Fort Totten at Devils Lake as part of a string of posts to protect the overland route from St. Paul to the Montana gold fields. The Sioux began to settle around Fort Totten, but because they numbered less than 500 there was no agent to arrange provisions for them. The commander at the fort was forced to supply the starving Indians with rations. Life remained difficult for the Fort Totten Sioux until a permanent agent was appointed for them in 1870. In 1875 James McLaughlin became agent for the Devils Lake reservation, and under his leadership the Sioux made the transition to farming as a means of subsistence (Meyer 1967).

4.2.3 Early Euro-American Settlement

Fort Totten was both the focus of the Sioux reservation at Devils Lake and the initial white settlement of the region. The first claims in the area were made by former military personnel who began farming on Grahams Island in the 1880s. In 1883 the area north of Devils Lake was opened for homesteading. At the same time the expansion of the railroads made this area accessible. The St. Paul, Minneapolis and Manitoba Railroad completed a line from Grand Forks to Devils

Lake in 1883. The following year the Jamestown and Northern Railroad was extended from the Northern Pacific Railroad at Jamestown northward along the western edge of the Devils Lake Sioux reservation to Minnewaukan.

The extension of the railroads led to a frantic period of town building and promotion. Each new townsite hoped to be a rail head. On the east end of Stump Lake, George Walsh platted the townsite of Harrisburg. At the narrows of Stump Lake another townsite was developed by the Wamduska Improvement Company. The townsite of Odessa, promoted by the Devils Lake Townsite Company, was located at the narrows between East Bay and Main Bay on Devils Lake. Grand Harbor was a townsite situated at the head of Six Mile Bay which briefly challenged Creelsburg, later renamed as the town of Devils Lake. When the Manitoba railroad went to Devils Lake, Harrisburg, Wamduska, Odessa and Grand Harbor were soon abandoned. Similarly, the townsites of West End and New Chicago were platted on the west side of Devils Lake, hoping to become stations along the Jamestown railroad. But when the tracks were laid to the rival town of Minnewaukan instead, both West End and New Chicago were doomed.

Several of the early towns around Devils Lake were dependent upon a rather shortlived steamboat trade. Steamboats operated on Devils Lake until about 1910, when the water level declined to a point where passage was no longer possible through some of the narrows.

4.2.4 Later Homesteaders

After a brief period of stagnation, in part caused by a national depression in the 1890s, North Dakota witnessed another settlement boom after the turn of the century. Railroad building began again, and special promotions were offered to entice new settlers to the region. Many of the new homesteaders were merely speculators, who did not live on the land. A report about the Devils Lake land office indicated that less than 35% of all entries commuted between 1898 and 1904 were occupied (Robinson 1966).

The Dawes Act of 1887 resulted in land on the Devils Lake reservation being allotted to individual tribal members. The "excess" land was then to be sold. Under an agreement carved out in 1901, some 100,000 acres of reservation land was ceded. Thus, a large part of reservation was opened to white settlement, when the sale of this land began in 1905 (Meyer 1967). Schweigert (1977) believes that many homesteads in the region date to this period. This was reflected by the growth of the town of Devils Lake from 1,729 residents in 1900 to a population of 5,157 a decade later (Robinson 1966). Many of these later homesteaders were of Scandinavian and German stock.

5.0 THEORETICAL ORIENTATION

Representatives of Powers discussed the proposed theoretical orientation for the Devils Lake cultural resources survey with archaeologist David Berwick of the St. Paul Corps on October 2, 1986. Subsequent to this meeting, a detailed research design was prepared by Powers and submitted to the Corps for their final approval (Floodman and Friedman 1986). That research design is included as Appendix B of this report and is summarized in this section. Some minor modifications in the research design have been made, in the identification of landforms selected for inventory along the channelization plans. In addition, the geomorphic landforms of the upstream lakes area have been identified more specifically. The research design served as the theoretical orientation for the field work. It is an attempt to study the relationship between geomorphic landforms and prehistoric site location, utilizing a small, 2,000 acre, non-random stratified survey sample. As instructed by the Corps, 80% of the inventory effort, or 1600 acres, was directed at the channelization plans, while only 20%, or 400 acres, was to be used to study the upstream lakes region.

5.1 BACKGROUND

A number of alternatives in the Devils Lake Basin are currently under study by the Corps to alleviate potential future flood damage caused by the natural rising level of Devils Lake. The alternatives include construction of one of five possible channel outlets from Devils Lake and Stump Lake to the Sheyenne River, or increasing the storage capacity of six lakes north of Devils Lake.

The Corps had a preliminary geomorphic study of the project area, centered along the proposed channelization plans, performed by Robert Larson, a geologist working for WES (Larson 1986). Larson's report discussed the geologic units in the project area, interpreted the Pleistocene and Holocene geomorphic development of the Devils Lake region, attempted to determine the relationship between geomorphology and archaeological site location, and indicated areas which might have a high potential for cultural resources. This information was drafted onto topographic maps covering the study area.

The Corps contract with Powers required that a sampling design be developed for the archaeological survey. As no single alternative has yet been selected by the Corps for construction, it was felt that a sample survey of the project area might be the most effective method of determining the nature of regional cultural resources. The goals of this design was to statistically sample enough of the project area to generate a model for prehistoric site location, thereby

testing Larson's (1986) conclusions. Based upon Larson's study, Powers selected sample units related to five geomorphic landforms crossed by the proposed project alternatives. This was an attempt to ascertain if specific landforms have a higher potential for cultural sites than others. The Powers' investigation should also provide information to help the Corps to identify which areas along each alternative may be sensitive in terms of cultural resources, for use during their environmental impact statement planning phase. Such a sampling design, because it examines all of the major landforms in the project area, may provide the Corps with relatively more data about areal cultural resources than a 100% inventory of narrow corridors covering a more restricted area of impact and perhaps only examining a single landform.

Based on conversations with the Corps, it was estimated that if a 200 foot wide corridor was examined around the center line of all project alternatives, approximately 4,000 acres would be surveyed. The Powers sample aimed at 50% coverage of the this estimated total, or 2,000 acres.

Powers designed a scheme for a non-random, stratified sample survey of the project area. Given the limitations of the contract, it was felt that a random sample would not be any more statistically valid. Therefore, Powers took a practical approach to selecting the sample units. The design focused on the identification of five main geomorphic units within the project area, and attempted to sample relatively equal amounts of each unit. The idea was to inventory different landforms along each of the project alternatives and determine if there was a correlation between geomorphology and prehistoric archaeological site location. It should also indicate if any particular alternative is more sensitive than the others in terms of cultural resources.

5.2 LIMITATIONS OF THE STUDY

The survey was biased by several factors, including the level of funding, time frame for the investigations, survey size, location of the project alternatives, and the priorities of the Corps. Each of these limitations is discussed below.

- 1) Only 2,000 acres were inventoried by Powers. This survey acreage is actually too small to adequately generate a probabilistic model for locating sites in specific geomorphic units, given the size of the Devils Lake Basin. The entire project area, including the channel plans and upstream lakes, covers 47 townships, or 1,692 sections, totalling 1,082,880 acres. For this region, the 2,000 acres surveyed represents a less than 1% sample. To be statistically valid, the sample should represent at least 10% of the total universe of the Devils Lake project area. To accomplish this, a much larger survey area would be necessary, totalling 170 sections, or

over 108,000 acres. This was not possible under the current contract. However, it must be remembered that the 2,000 acres does represent about half of the total acreage of the project alternatives, if narrow corridors alone were examined.

2) The location of the project alternatives also biased the sample design. These alternatives were selected for engineering reasons and they do not cover all of the geomorphic units in the Devils Lake Basin on an equal basis. In fact, when each of the channel routes are studied in detail, most of the plans are confined primarily to the course of existing meltwater corridors which cover a single geomorphic unit: outwash channels. These channel bottoms have a low potential for cultural resources and exhibit up to six feet of fill (Larson 1986). The sides of the channels have a higher potential for prehistoric sites, as they may have been utilized as routes between Devils Lake and the Sheyenne River. Unlike the channel bottoms, the uplands above these corridors encompass a number of different geomorphic units. In order to sample a wider variety of landforms, block areas away from the channel bottoms, rather than just the project plan corridors, were chosen for inventory. These blocks covered all of the landforms through which the channels pass. However, when more land outside of the channel bottoms were examined, less of the actual alternative impact areas were inventoried.

Similarly, much of the areas traversed by several of the alternatives are dominated by the lacustrine landform. The route of several channels, particularly Plans 7A and B-D, between Devils Lake and Stump Lake and the upper reaches of Plan 2, consist entirely of lacustrine deposits. This is also true for the upstream lakes, where most of the shoreline is former lake bottom. Therefore, areas away from the modern lakes were sampled. This included prehistoric beaches and higher areas not previously flooded.

As mentioned above, a random sample was not utilized for this survey. Instead, a stratified sample was selected by landform and project alternative. Stratified sampling necessitates a prior knowledge of the project area, which can then be subdivided into various units or strata. The purpose of stratification is to select sample units from each stratum so that the full range of variability that exists in the project area exists in the sample units. When unequal sampling fractions are utilized among the various strata of the total population, a disproportional stratified scheme results (Mueller 1974). In this case, the project area is stratified into geomorphic units as defined by Larson (1986). Although, for the current project, the strata sampling fractions were generally unequal, because of the variation in surface area of the different landforms and the location of project alternatives, an attempt has been made to survey approximately equal amounts of each landform, where possible.

The selected units were usually located near roads, fences, and distinct topographic features. This was to ensure rapid and easy access and easy definition of the survey areas on the ground. In this sense, the survey was slightly biased by man made features as well as natural topography.

5) The priorities of the Corps for certain project alternatives definitely biased the sample. Only 20% of the sample was conducted on the upstream lakes, while 80% encompassed the channelization plans. While each of the project alternatives was investigated, the same level of effort was not devoted to each individual plan. In some cases, the kinds of landforms crossed by the plan determined how much of it was sampled, while in other cases project priorities dictated the amount surveyed. For example, the Corps told Powers that Plan No. 7A-F connecting East Devils Lake with Stump Lake was the most likely channel to be made operational in the near future. Therefore, Powers tried to survey this channel area more extensively of any of the other alternatives. Also, the Corps specifically requested that several historic sites be arbitrarily selected from around the upstream lake region for recordation, even at the expense of the total number of acres to be surveyed in this area.

5.3 GEOMORPHIC LANDFORMS

The geomorphic study by Larson (1986) covers the area between Devils Lake and the Sheyenne River. It did not discuss the geomorphic landforms of the upstream lakes. Using Larson's report, five major geomorphic landform units were identified for Powers' investigation between the Devils Lake-Stump Lake complex and the Sheyenne River. They are: 1) terminal moraines (stagnation and end moraines); 2) outwash plains; 3) outwash channels; 4) lacustrine and lakeshore sediments; and 5) alluvium. In addition, ground moraine deposits were sampled in the vicinity of the lakes north of Devils Lake.

Given the small survey size, the number of landforms considered for survey was limited to the six geomorphic units mentioned above. This was necessary in order to sample sufficient amounts of each landform. Other geomorphic units discussed by Larson were excluded from the sample design because they are not integrally related to the proposed project alternatives. These other landforms include kames, which are in the general vicinity and are suspected by Larson to be of high site potential, but are not impacted by the proposed project features; eskers, which are found in the vicinity of Stump Lake and are related to several mound sites recorded by Schneider et al. (1977), but do not appear with any frequency along any other project alternatives; terraces of the Sheyenne River Valley; and aeolian dune deposits which occur in outwash plain areas west of Hamar, but are not crossed by any proposed channel plan.

The six major geomorphic units to be sampled are defined below.

1) Terminal Moraines - The term terminal moraine is used to include both stagnation and end moraine deposits in the project area. The distinction between these geomorphic units is somewhat arbitrary, with a stagnation moraine transitional to an end moraine. The deposits are similar, and both were found at the terminal margin of a glacial. Resultant topography consists of "knob and kettle" terrain. Both stagnation and end moraines could potentially be sources of lithic materials and contain cobbles for tipi rings, stone cairns, etc.

Terminal moraine is common between Devils Lake and the Sheyenne River. The location of moraine deposit could influence site settlement patterns. It is expected that terminal moraine deposits on highlands adjacent to the Sheyenne River would have a high potential for sites, as would such deposits by lakes. In open rolling areas the site potential should decrease, although sites could be located near small seasonal water holes or springs. Terminal moraine deposits can be found at uplands adjacent to the Sheyenne River, along former and existing lakeshores, on the open plains and above outwash channels.

2) Outwash Plains - The outwash plains are glacial sediment, consisting chiefly of sands and medium gravels, transported by melt water. It results in gently sloping surfaces which are pitted from melting ice. Sediments were reworked by melt waters. There may be a relationship between mounds of the outwash plains in the eastern Devils Lake area and site locations, according to Larson (1986).

Sample areas which contain outwash plains included the Sheyenne River uplands and the open rolling plains between the Sheyenne River and Devils Lake. These areas were assumed to have high site potential and low site potential respectively.

3) Outwash Channels - Large volumes of melt water, leaving the glacial front, have scoured deep and well defined stream channels referred to as outwash channels. These outwash channels are now dry or may have active or intermittent streams, often with small chain or bead lakes associated with them. The bottoms of the channels were expected to have a low site potential because they have been subject to up to six feet of fill since Pleistocene times.

Areas adjacent to the channels were sampled in conjunction with the outwash channels themselves. This survey stratum included the outwash channel bottoms, shoreline along the small lakes associated with the outwash channel bottoms and the open plains above and adjacent to the outwash channels.

4) Lacustrine and Lakeshore Deposits - These are landforms associated with lakes. Lacustrine deposits associated with the Devils Lake-Stump Lake complex were examined.

It was expected that the lacustrine deposits and modern shoreline would have a low potential for site locations. However former beach areas, from which the lakes have receded, may have a high potential for archaeological sites, as will the transitional area where the former beaches meet the higher surrounding moraine deposits.

5) Alluvium - This landform consists of fine clays, sands, and silts deposited by moving water along riverbeds and lakeshores. In the project area it is confined to the flood plain of the Sheyenne River Valley. Areas adjacent to large tributary streams should have good potential for archaeological site locations. However, it is possible that sites have been buried under more recent alluvial deposits. Powers sampled units of alluvium adjacent to where several of the channel plans empty into the Sheyenne River. Buried cultural materials were sought by examining cutbanks, and conducting some limited subsurface archaeological testing.

6) Ground Moraine - This refers to the rock debris dragged along in and beneath a glacier. Material was deposited when the ice sheet abated forming an extensive, fairly even thin layer of till, having a gently rolling surface. An irregular shoreline may be formed where masses of glacial drift abut against a large body of water, such as a sea or lake, called a ground moraine shoreline. All of the ground moraine sampled during the Powers survey was found adjacent to the lakes north of Devils Lake.

5.4 PROJECT ALTERNATIVES

The Corps is considering two major flood control alternatives. The first is the channelization plans between the Devils Lake-Stump Lake complex and the Sheyenne River. The second is the rising of water levels for upstream lakes.

5.4.1 The Channelization Plans

The Corps is considering five alternatives for outlet channels from Devils Lake to the Sheyenne River (see Figure 2). In general, these channels would be shallow, up to 10 ft deep, and about 100 ft wide at the top. The total area of disturbance for the channels, including the outside berms, would average between 150 and 500 ft. In some cases, a pumping station would be constructed to raise the water about 30 to 100 ft above Devils Lake, over the divide, to allow gravity flow to the Sheyenne River. In other cases a dam and

ponding area will be created to hold water outside of Devils Lake before sending it down the channels.

If a 200 ft wide impact area along the center line of each of the channel plans was surveyed, it is estimated that 2,000 acres total would be encompassed. Within the Powers research design, 1,600 acres, or 80% of the total sample, was concentrated on the channels. This would represent 80% of the total acres of the narrow channel corridors. However, in order to sample the geomorphic landforms adjacent to these plans, units were selected away from the actual channel corridors. This reduced the amount of coverage on individual alternatives, but enabled Powers to examine the various geomorphic landforms discussed earlier, which contributes to the goal of showing the relationship between archaeological site locations and landforms.

Of the 1,600 acres samples, 1,525 acres (or 95%) was statistically derived prior to the field work, to test relatively equal amounts of each of the landforms crossed by the project alternatives. The remaining 75 acres (five percent) was sampled intuitively, for various reasons, while in the field. The intuitive survey areas were added to the statistical sample to determine how much of each landform was inventoried within the total of 1,600 acres examined along the channel alternative. The survey coverage for each of the five major landforms is given in Table 1.

Roughly equal amounts of each landform was covered in the channel plans area, except for river alluvium. This geomorphic unit is the most restricted in occurrence and is only present at the mouth of the proposed channels along the Sheyenne River. Therefore, only eight percent of inventory of the plan alternatives was done on alluvium. The other geomorphic units totaled between 20% and 26% each of the survey sample.

Table 2 lists the actual locations, along with the acreage, for each of the geomorphic sample units surveyed along the channelization plans. These sample units are illustrated, together with Powers archaeological site location, on Figure 9-24.

The individual channel alternatives are listed in Table 3 by landform. The table illustrates the percentage of each landform being sampled along each plan. The location of the channel corridor, for the most part, determined what kind of landforms could be sampled along it. Therefore, each plan does not contain equal amounts of the different landforms inventoried. Some variance in the actual totals can be observed in the case of Plans 6, 7A and 7B-D. The southern terminus of these plans share a joint route to the Sheyenne River and some survey areas are applicable to all three of

Devils Lake Flood Control Project

Table 1

LANDFORMS SAMPLED ALONG THE CHANNELIZATION PLANS

<u>Landforms</u>	<u>Acres Surveyed</u>	<u>% of Total Sample</u>
Terminal Moraines	340 acres	21%
Outwash Plains	320 acres	20%
Outwash Channels	400 acres	25%
Lacustrine Deposits	425 acres	26%
Alluvium	115 acres	8%
<hr/>		
Totals:	1600 acres	100%

Devils Lake Flood Control Project

Table 2

AREAS SURVEYED - CHANNELIZATION PLANS

<u>Geomorphic Landforms</u>	<u>Topographic Quadrangle</u>	<u>Plan No.</u>	<u>LEGAL Description</u>	<u>Acreage</u>
Terminal Moraines	Tokio	5C	W $\frac{1}{2}$ W $\frac{1}{2}$ SE $\frac{1}{4}$ and E $\frac{1}{2}$ E $\frac{1}{2}$ SW $\frac{1}{4}$ Section 1, T.151N., R.64W., Benson County.	80
	Horseshoe Lake	5C	NW $\frac{1}{4}$ NE $\frac{1}{4}$, Section 6, T.150N., R.63W., Eddy County.	40
	Josephine	2	W $\frac{1}{2}$ NW $\frac{1}{4}$, Section 19, T.152N., R.67W., Benson County.	80
	Sheyenne	3	N $\frac{1}{2}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ and N $\frac{1}{2}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$, Section 31, T.151N., R.65W. S $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ and S $\frac{1}{2}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$, Section 30, T.151N., R.65W. Benson County.	60
	Devils Lake Mountain	7A-F	NE $\frac{1}{4}$, Section 27, T.152N., R.62W., Ramsey County.	40
	Pekin NW	7A-F	E $\frac{1}{2}$ SW $\frac{1}{4}$ and W $\frac{1}{2}$ SE $\frac{1}{4}$, Section 27, T.152N., R.61W., Nelson County.	40
Subtotal				340
Outwash Plains	Tolna	6, 7A & B-D	W $\frac{1}{2}$ SW $\frac{1}{4}$, Section 33, T.151N., R.61W., Nelson County.	80
	Tolna	6, 7A & B-D	N $\frac{1}{2}$ SE $\frac{1}{4}$, Section 24, T.150N., R.61W., Nelson County.	80
	Hamar	6	W $\frac{1}{2}$ SW $\frac{1}{4}$, Section 35, T.151N., R.62W., Benson County.	80
	Hamar	6	SW $\frac{1}{4}$ SE $\frac{1}{4}$, Section 35, T.151N., R.62W., Benson County.	40
	Horseshoe Lake	5C	NE $\frac{1}{4}$ NE $\frac{1}{4}$, Section 6, T.150N., R.63W., Eddy County.	40
Subtotal				320

Table 2
page 2

<u>Geomorphic Landforms</u>	<u>Topographic Quadrangle</u>	<u>Plan No.</u>	<u>Legal Description</u>	<u>Acreage</u>
Outwash Channels	Tolna	6, 7A & B-D	W $\frac{1}{2}$ SE $\frac{1}{4}$, Section 2, T.150N., R.61W., Nelson County.	80
	Crow Hill	3	W $\frac{1}{2}$ NW $\frac{1}{4}$, Section 14, T.151N., R.66W., Benson County.	80
	Crow Hill	3	NE $\frac{1}{4}$ NE $\frac{1}{4}$, Section 4, T.151N., R.66W., Benson County.	40
	Minnewaukan East	2	NE $\frac{1}{4}$, Section 4, T.152N., R.67W., Benson County.	80
	Devils Lake Mountain	7A-F	SW $\frac{1}{4}$ NW $\frac{1}{4}$, Section 19, T.151N., R.61W., Nelson County.	40
	Tolna	6, 7A	S $\frac{1}{2}$ SE $\frac{1}{4}$, Section 19, T.150N., R.60W., Nelson County.	80
Subtotal				400
Lacustrine Deposition	Minnewaukan East	2	SW $\frac{1}{4}$ SW $\frac{1}{4}$, Section 18, T.153N., R.66W., Benson County.	40
	Minnewaukan East	2	NE $\frac{1}{4}$ NE $\frac{1}{4}$, Section 24, T.153N., R.67W., Benson County.	40
	Minnewaukan East	2	SW $\frac{1}{4}$ NW $\frac{1}{4}$, Section 25, T.153N., R.67W., Benson County.	40
	Sheyenne	3	NE $\frac{1}{4}$ NE $\frac{1}{4}$, Section 33, T.151N., R.66W., Benson County.	40
	Devils Lake Mountain	7A-F	S $\frac{1}{2}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ and N $\frac{1}{2}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$, Section 24, T.152N., R.62W., Ramsey County.	40
	Pekin NW	7A-F	SE $\frac{1}{4}$ SE $\frac{1}{4}$, Section 27, T.152N., R.61W., Nelson County.	40
	Tolna	7C	NW $\frac{1}{4}$ SE $\frac{1}{4}$ and SW $\frac{1}{4}$ NE $\frac{1}{4}$, Section 27, T.151N., R.61W., Nelson County.	80
	Pekin NW	7A-F	NW $\frac{1}{4}$ NE $\frac{1}{4}$, Section 29, T.152N., R.61W., Nelson County.	40

Table 2
page 3

<u>Geomorphic Landforms</u>	<u>Topographic Quadrangle</u>	<u>Plan No.</u>	<u>Legal Description</u>	<u>Acreage</u>
Lacustrine Deposition	Josephine	2	S½SW¼SW¼, Section 18, T.152N., R.67W., Benson County.	20
	Tokio	5C	NW¼SW¼, Section 19, T.151N., R.63W., Benson County.	40
	Tokio	5C	NE¼NE¼NW¼ & NW¼NW¼NE¼, Section 12, T.151N., R.64W., Benson County.	5
Subtotal				425
Alluvium	Flora	2	E½SE¼, Section 17, T.151N., R.68W., Benson County.	30
	Flora	2	NE¼NE¼, Section 20, T.151N., R.68W., Benson County.	10
	Horseshoe Lake	5C	NW¼NW¼, Section 20, T.150N., R.63W., Eddy County.	25
	Sheyenne	3	Center, Section 29, T.151N., R.65W., Benson County.	50
Subtotal				115
Grand Total				1600

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Table 3

LANDFORMS SAMPLES BY CHANNEL PLAN

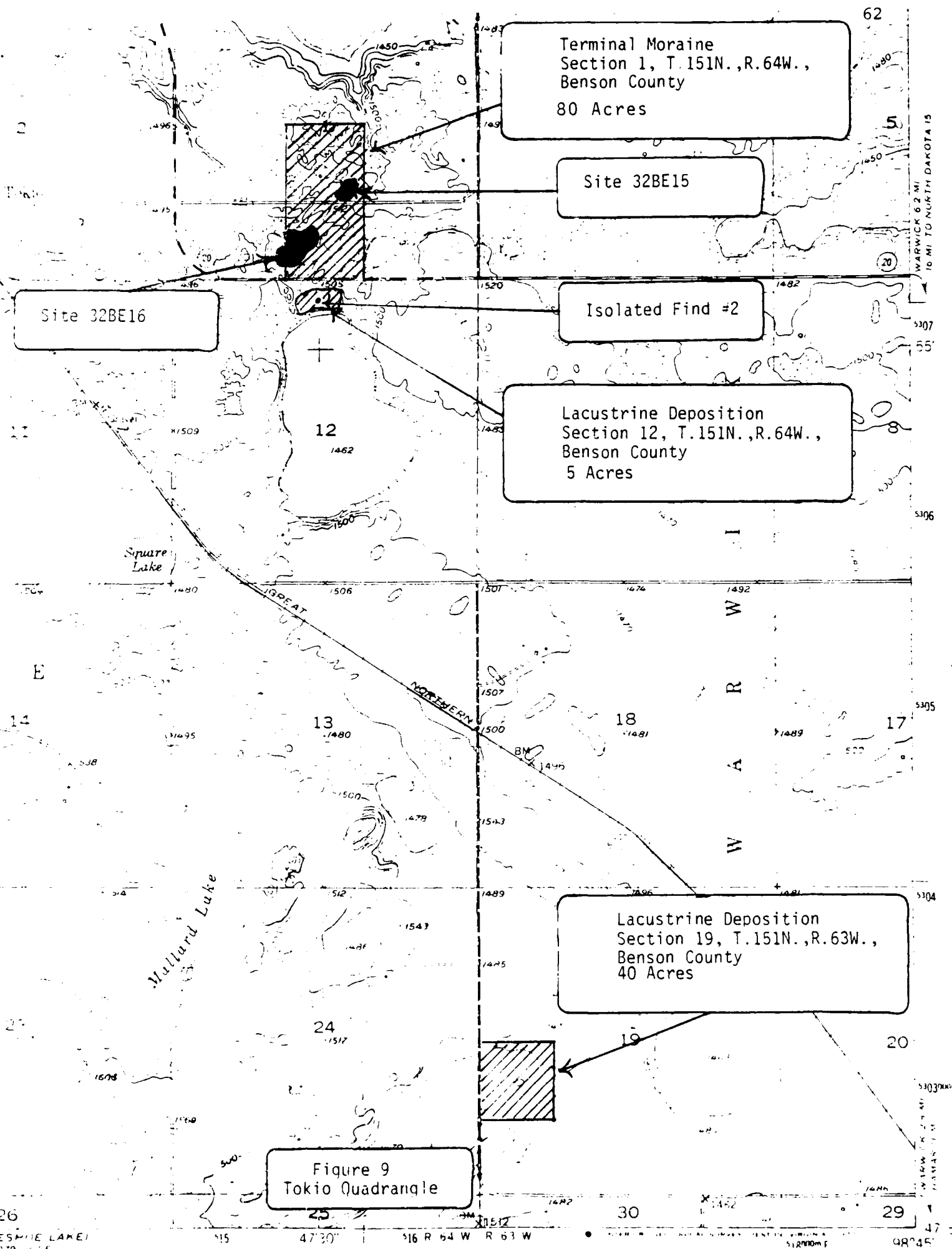
<u>Landforms</u>	<u>Plan 2 Acres/%</u>	<u>Plan 3 Acres/%</u>	<u>Plan 5C Acres/%</u>	<u>Plan 6 Acres/%</u>	<u>Plan 7 Acres/%</u>	<u>Totals Acres/%</u>
Terminal Moraine	80/24%	60/17%	120/35%	0/0	80/24%	340/100%
Outwash Plains	0/0	0/0	40/13%	200/62%	80/25%	320/100%
Outwash Channels	80/20%	120/30%	0/0	80/20%	120/30%	400/100%
Lacustrine Deposition	140/33%	40/9%	45/11%	0/0	200/47%	425/100%
Alluvium	40/35%	50/43%	25/12%	0/0	0/0	115/100%
<hr/>						
Subtotals:	340/21%	270/17%	230/14%	280/18%	480/30%	1600/100%

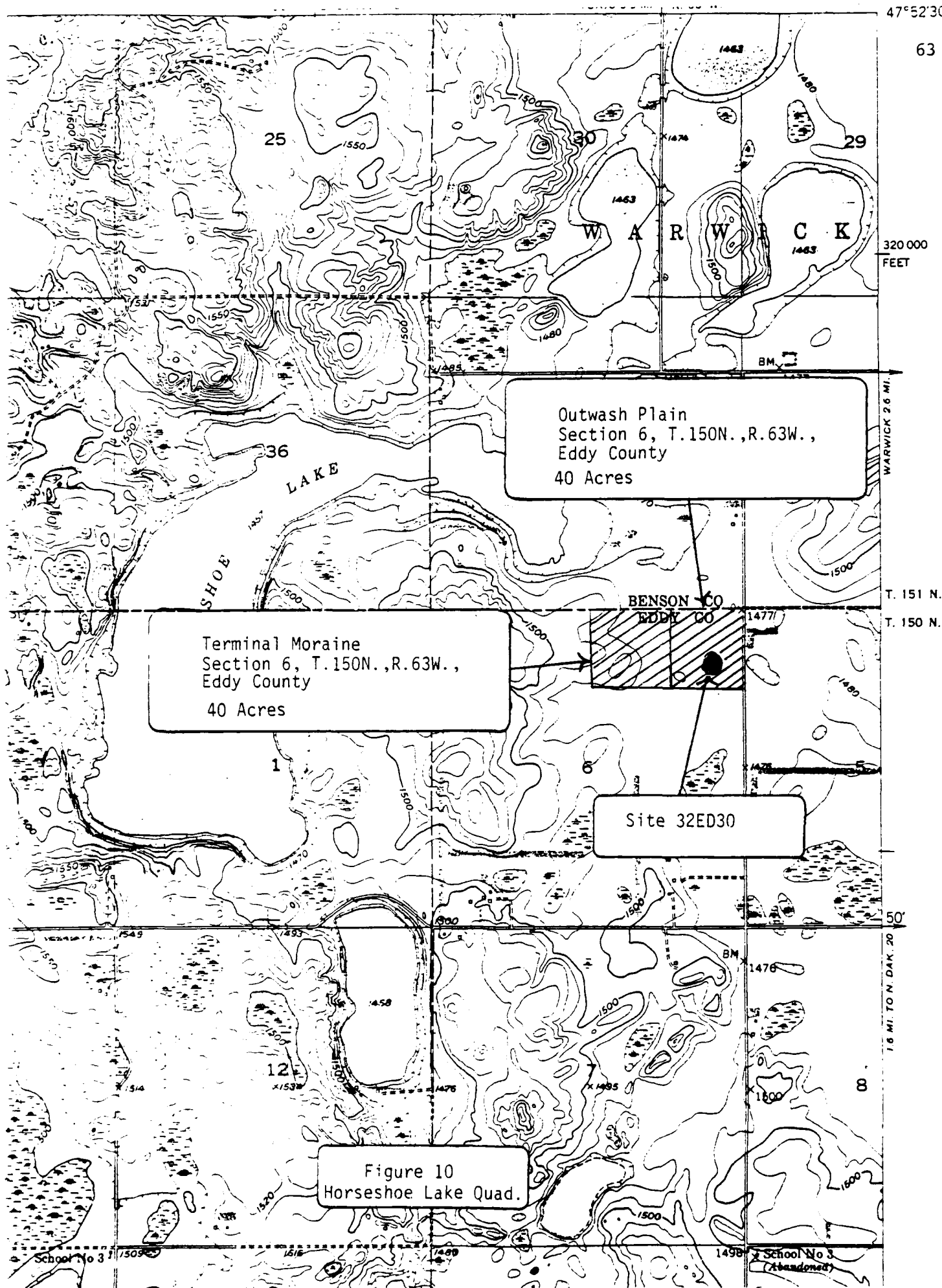
Devils Lake Flood Control Project

Table 4

CHANNEL PLANS: STATISTICAL SAMPLE

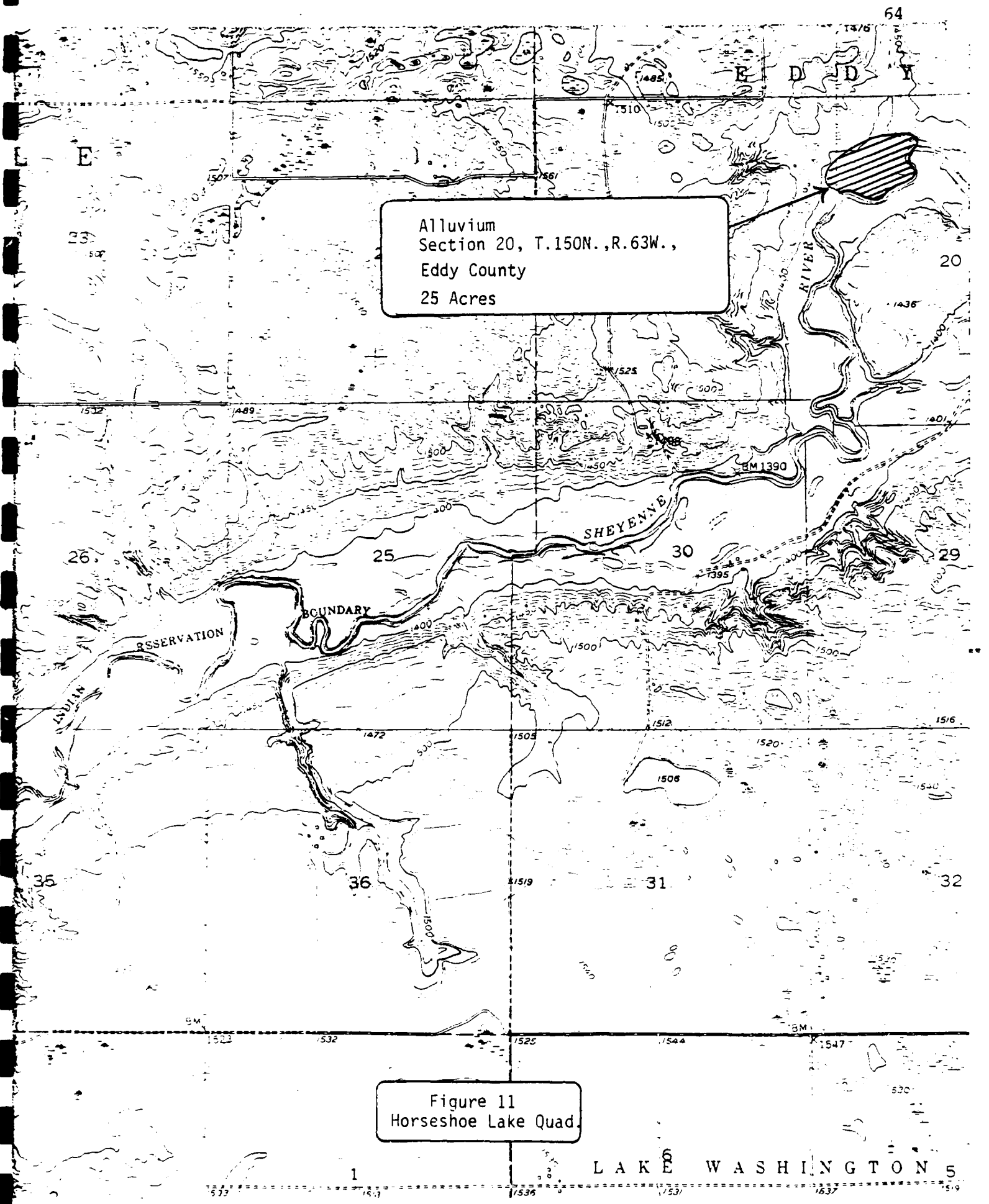
<u>Channel Plan Alternatives</u>	<u>Total Acres Along Plans</u>	<u>% of All Plans</u>	<u>Sample Acres</u>	<u>% of Each Plan</u>	<u>% of Total Sample Survey</u>
2	350	17%	340	97%	21%
3	300	15%	270	90%	17%
5C	250	13%	230	92%	14%
6	500	25%	280	56%	18%
7	<u>600</u>	<u>30%</u>	<u>480</u>	<u>80%</u>	<u>30%</u>
	2000	100%	1600	----	100%

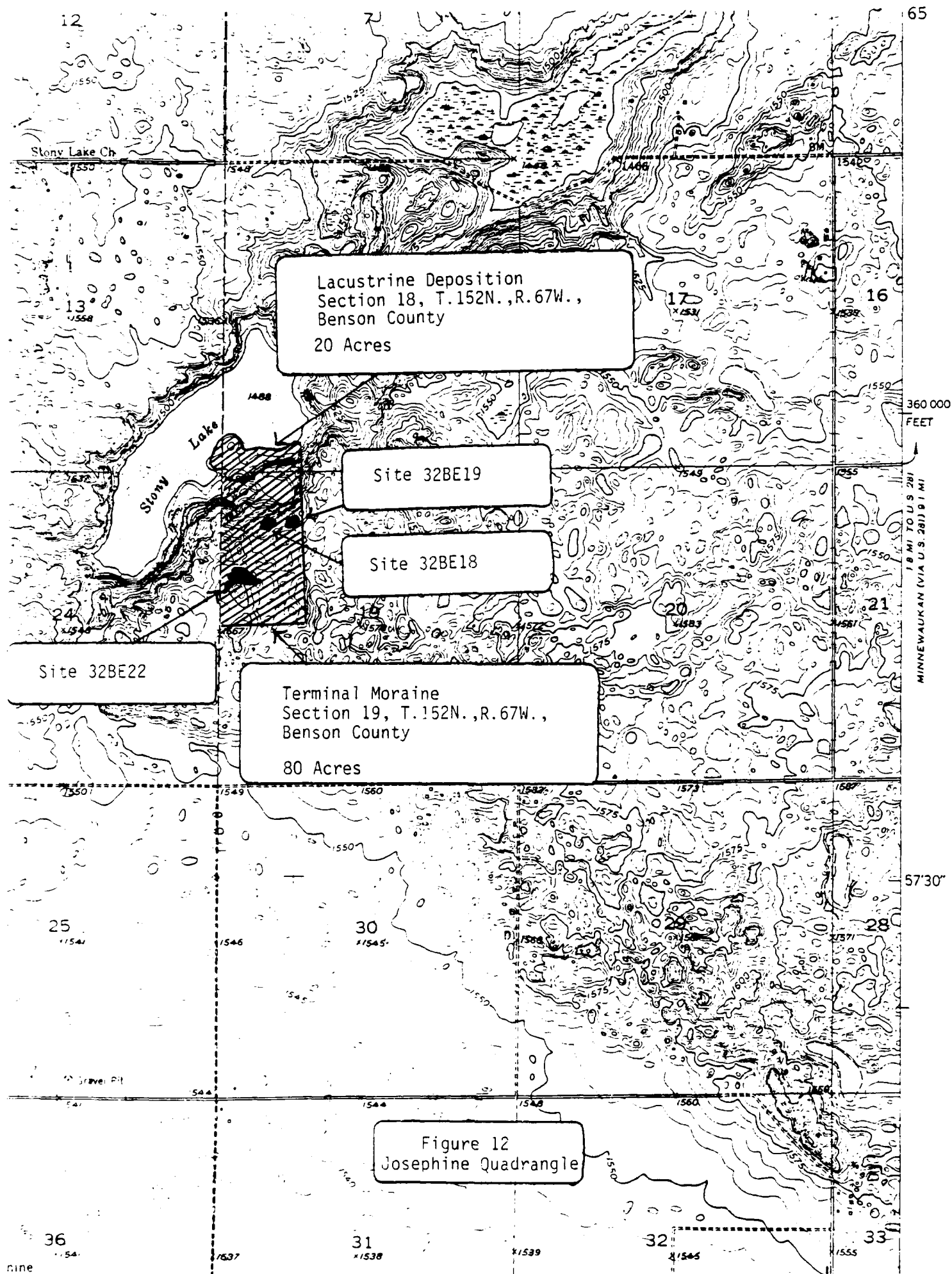




Alluvium
Section 20, T.150N.,R.63W.,
Eddy County
25 Acres

Figure 11
Horseshoe Lake Quad.





NE
HILL)

496

R. 66 W R. 65 W.

2'30"

2360000 FEET

499

SE/4 OBERON 15' QUADRANGLE

99° 00'

FOR
66

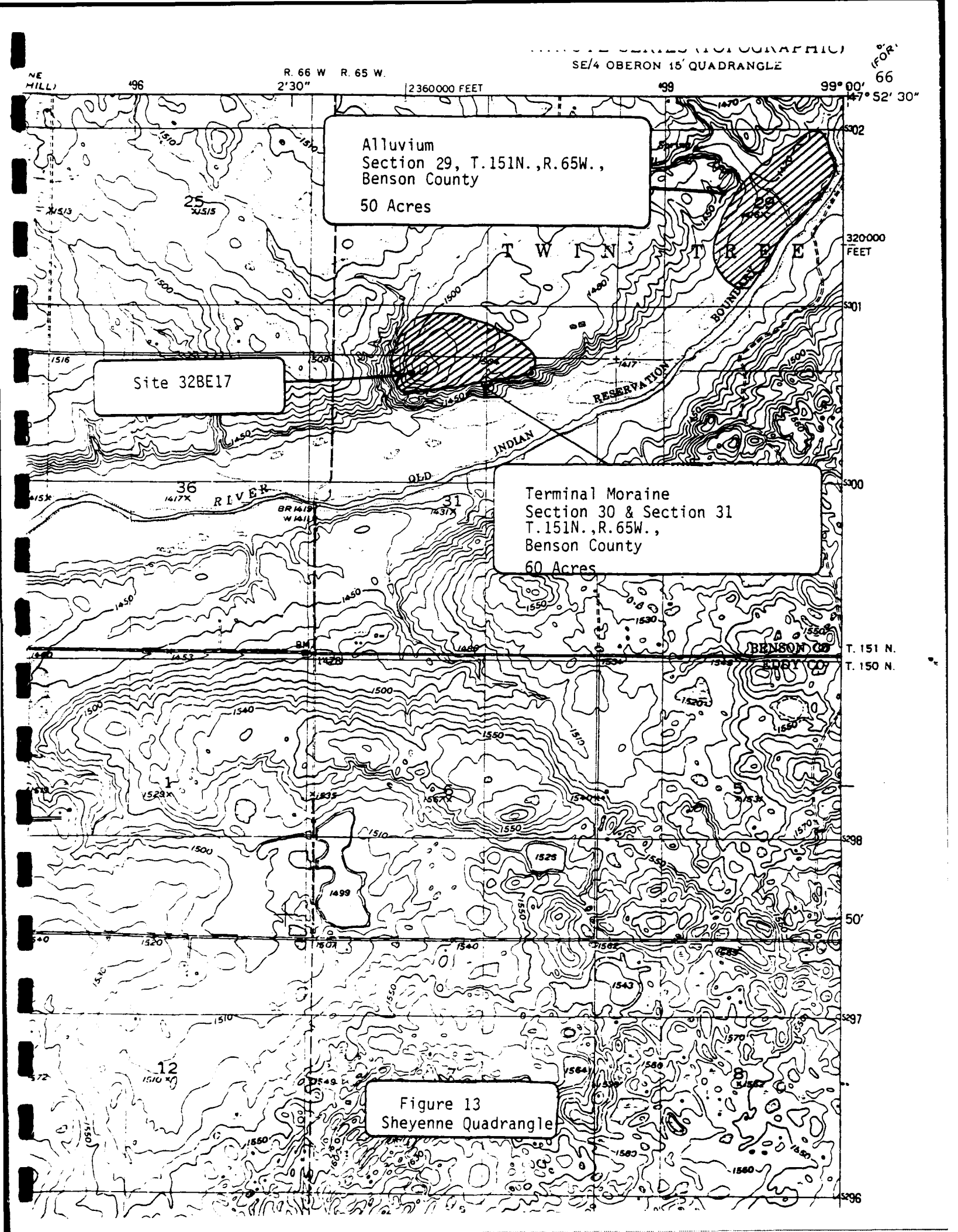
47° 52' 30"

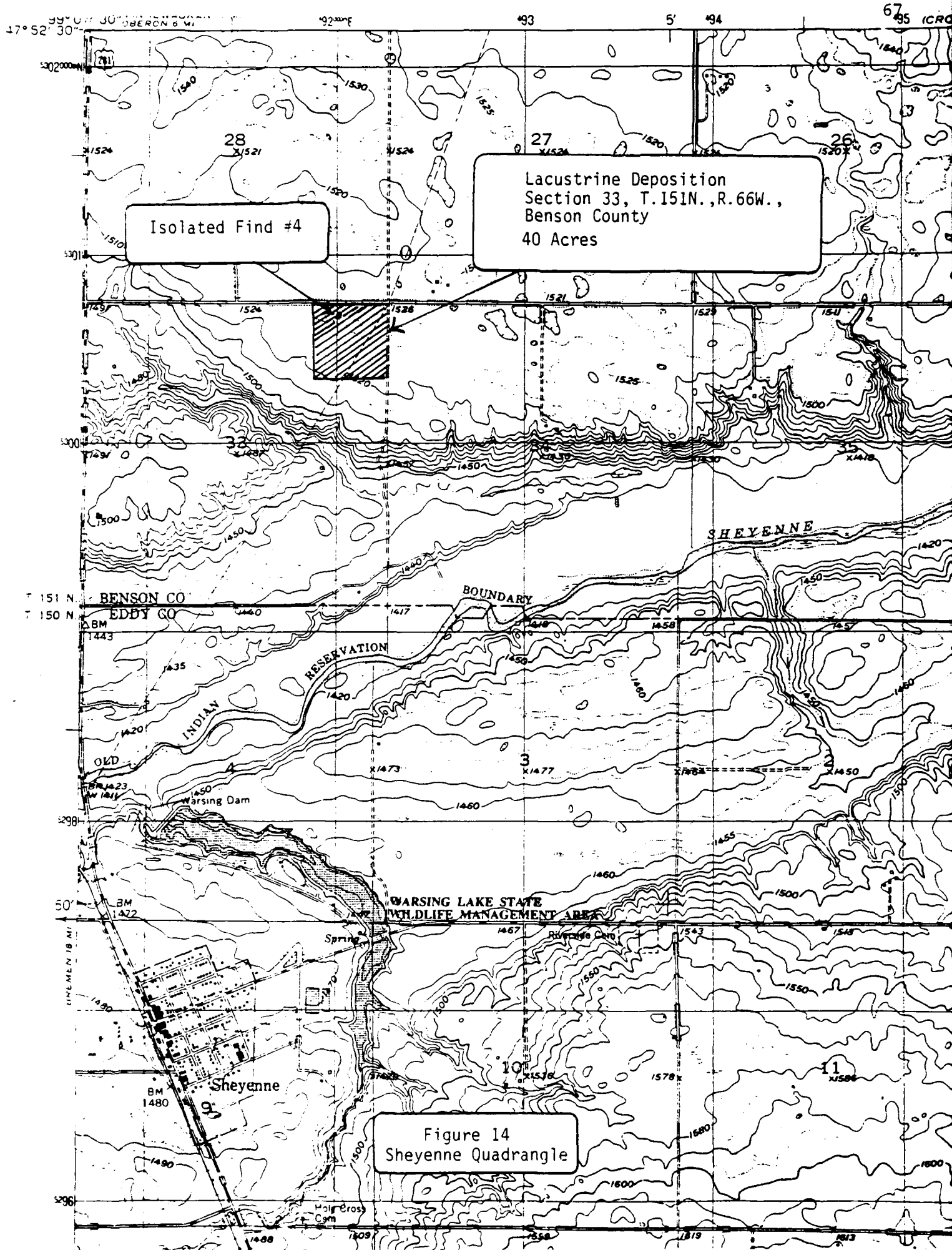
Alluvium
Section 29, T.151N., R.65W.,
Benson County
50 Acres

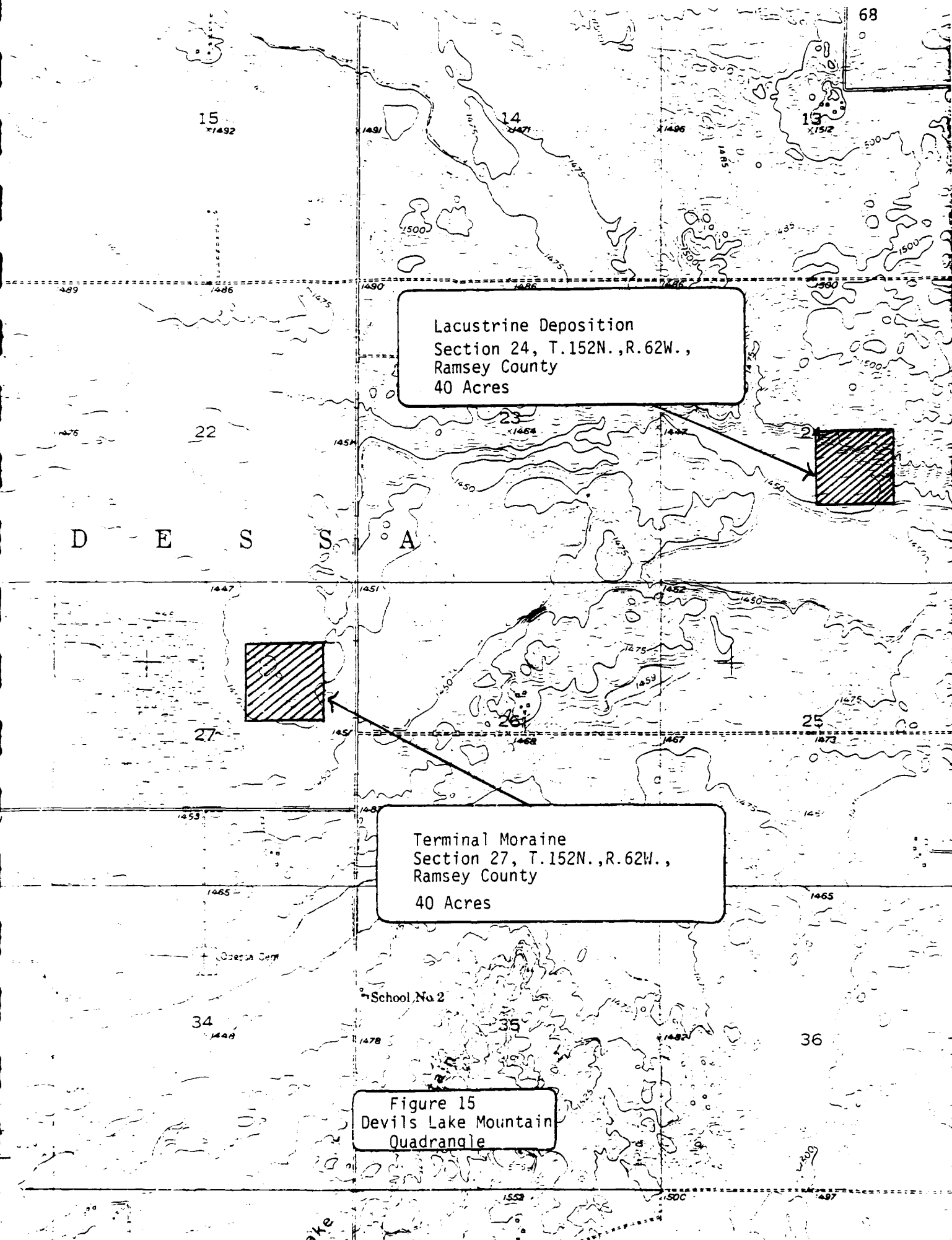
Site 32BE17

Terminal Moraine
Section 30 & Section 31
T.151N., R.65W.,
Benson County
60 Acres

Figure 13
Sheyenne Quadrangle



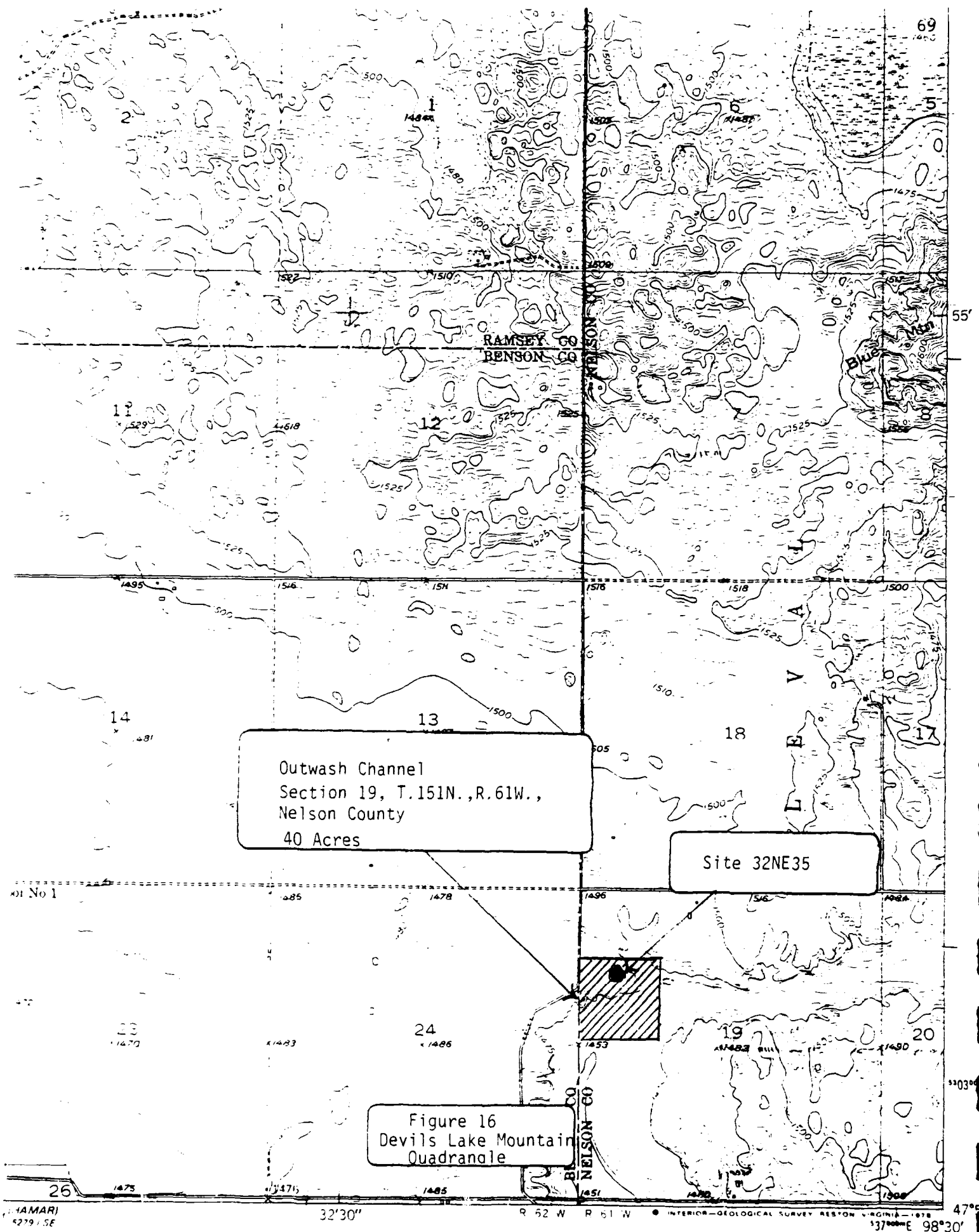




Lacustrine Deposition
Section 24, T.152N., R.62W.,
Ramsey County
40 Acres

Terminal Moraine
Section 27, T.152N., R.62W.,
Ramsey County
40 Acres

Figure 15
Devils Lake Mountain
Quadrangle



Outwash Channel
Section 19, T.151N., R.61W.,
Nelson County
40 Acres

Site 32NE35

Figure 16
Devils Lake Mountain
Quadrangle

Lacustrine Deposition
Section 29, T.152N., R.62W.,
Nelson County
40 Acres

Lacustrine Deposition
Section 27, T.152N., R.61W.,
Nelson County
40 Acres

Site 32NE38

Terminal Moraine
Section 27, T.152N., R.61W.,
Nelson County
40 Acres

Figure 17
Pekin NW Quadrangle

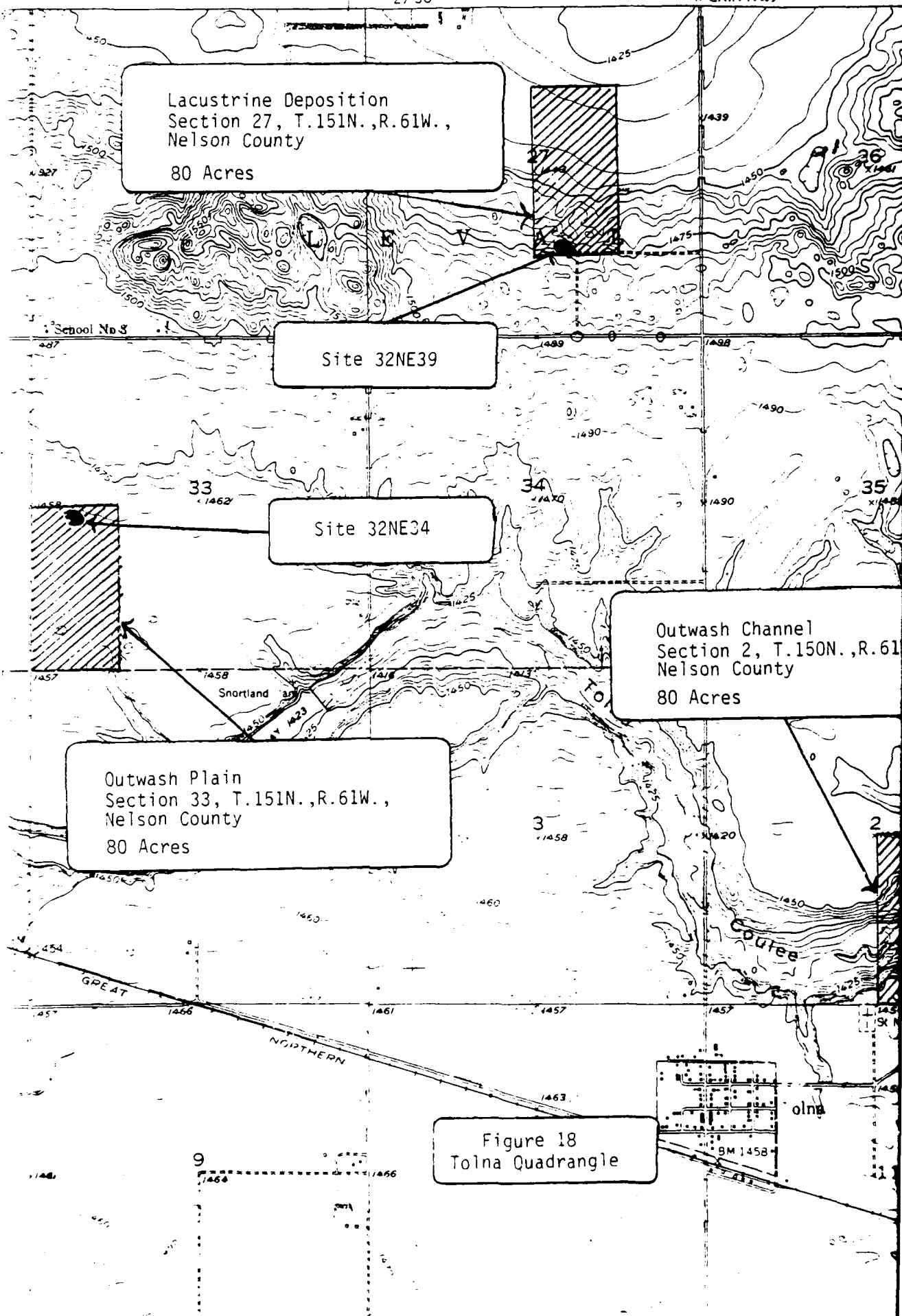
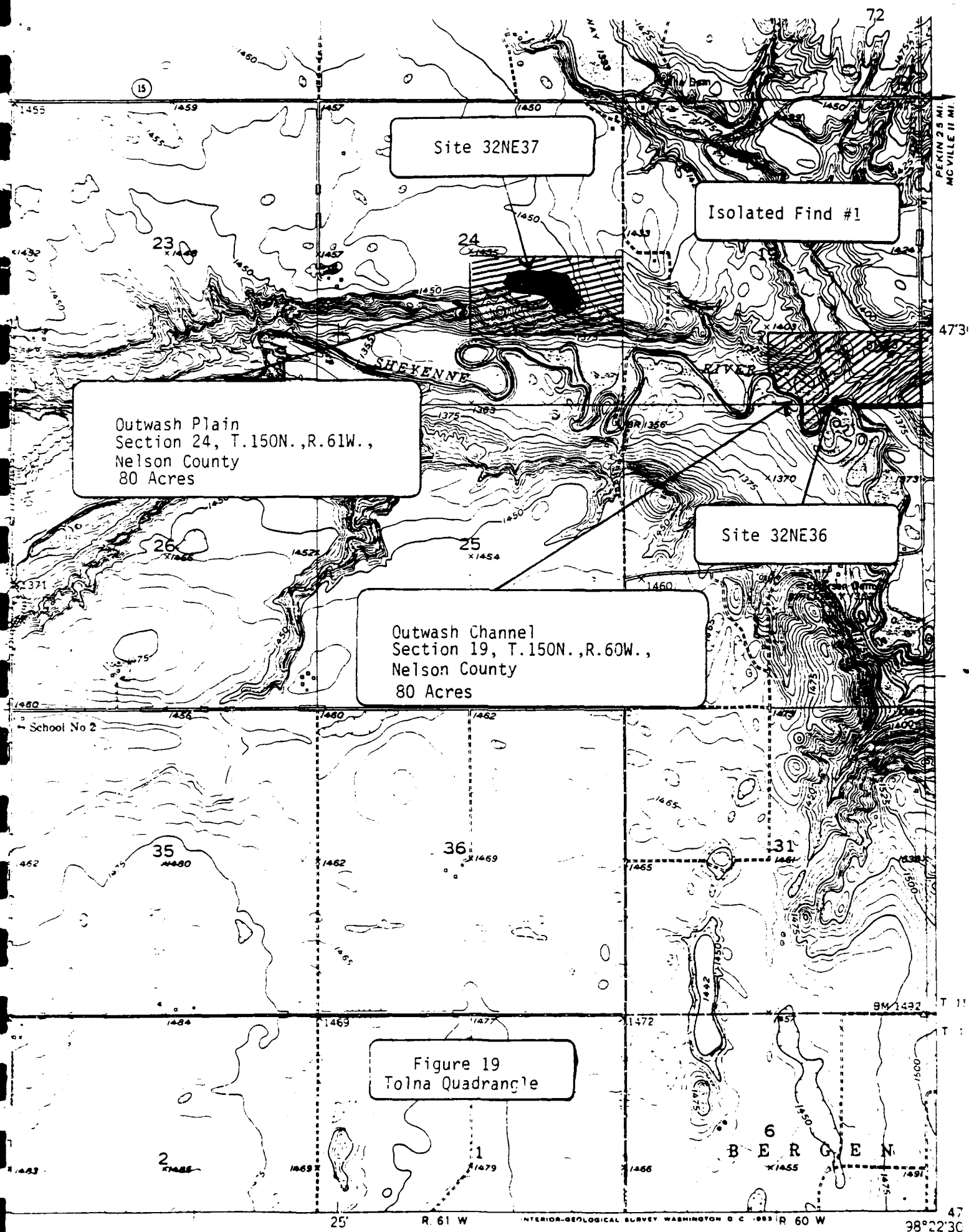


Figure 18
Tolna Quadrangle



Site 32NE37

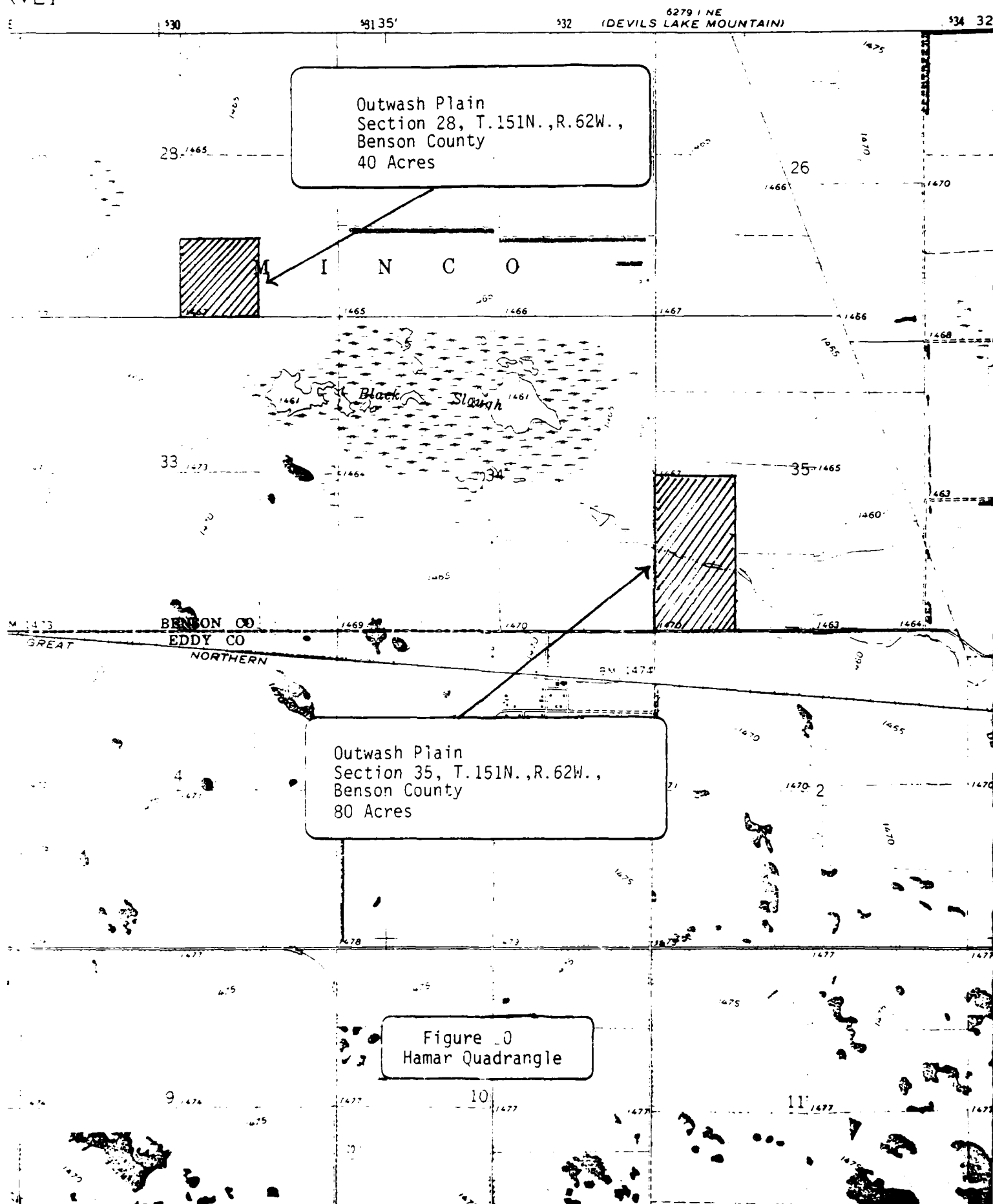
Isolated Find #1

Outwash Plain
Section 24, T.150N., R.61W.,
Nelson County
80 Acres

Site 32NE36

Outwash Channel
Section 19, T.150N., R.60W.,
Nelson County
80 Acres

Figure 19
Tolna Quadrangle



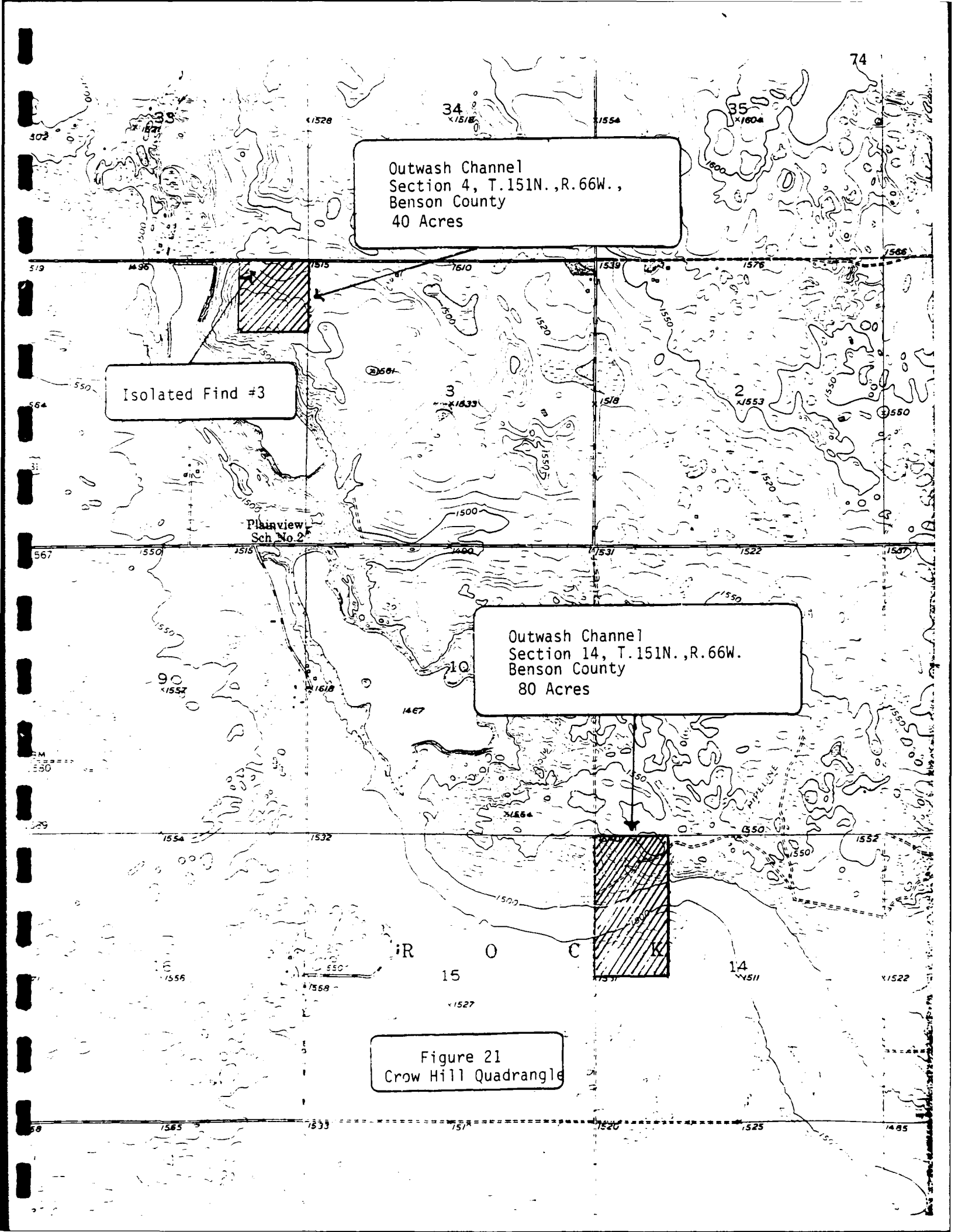
Outwash Channel
Section 4, T.151N.,R.66W.,
Benson County
40 Acres

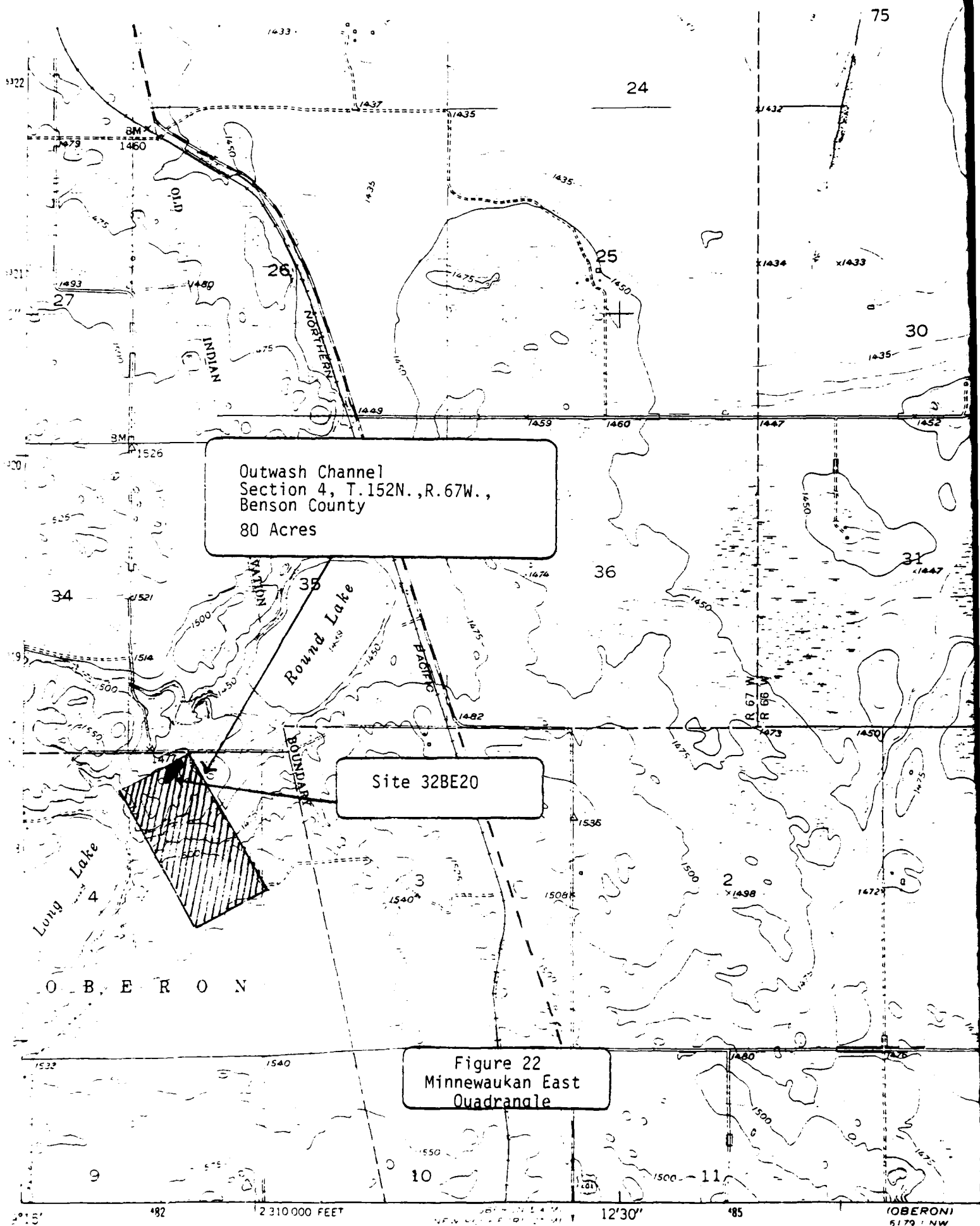
Isolated Find #3

Plainview
Sch No 2

Outwash Channel
Section 14, T.151N.,R.66W.
Benson County
80 Acres

Figure 21
Crow Hill Quadrangle





Outwash Channel
Section 4, T.152N., R.67W.,
Benson County
80 Acres

Site 32BE20

Figure 22
Minnewaukan East
Quadrangle

INDEFINITE

76

426

E S T

B

A

Lacustrine Deposition
Section 18, T.153N., R.66W.,
Benson County
40 Acres

Windmill
1439

13

B A Y

18

BM

1438

1428

19

Lacustrine Deposition
Section 24, T.153N., R.67W.,
Benson County
40 Acres

24

24

Lacustrine Deposition
Section 25, T.153N., R.67W.,
Benson County
40 Acres

25

Figure 23
Minnewaukan East
Quadrangle

29

30

1459

1460

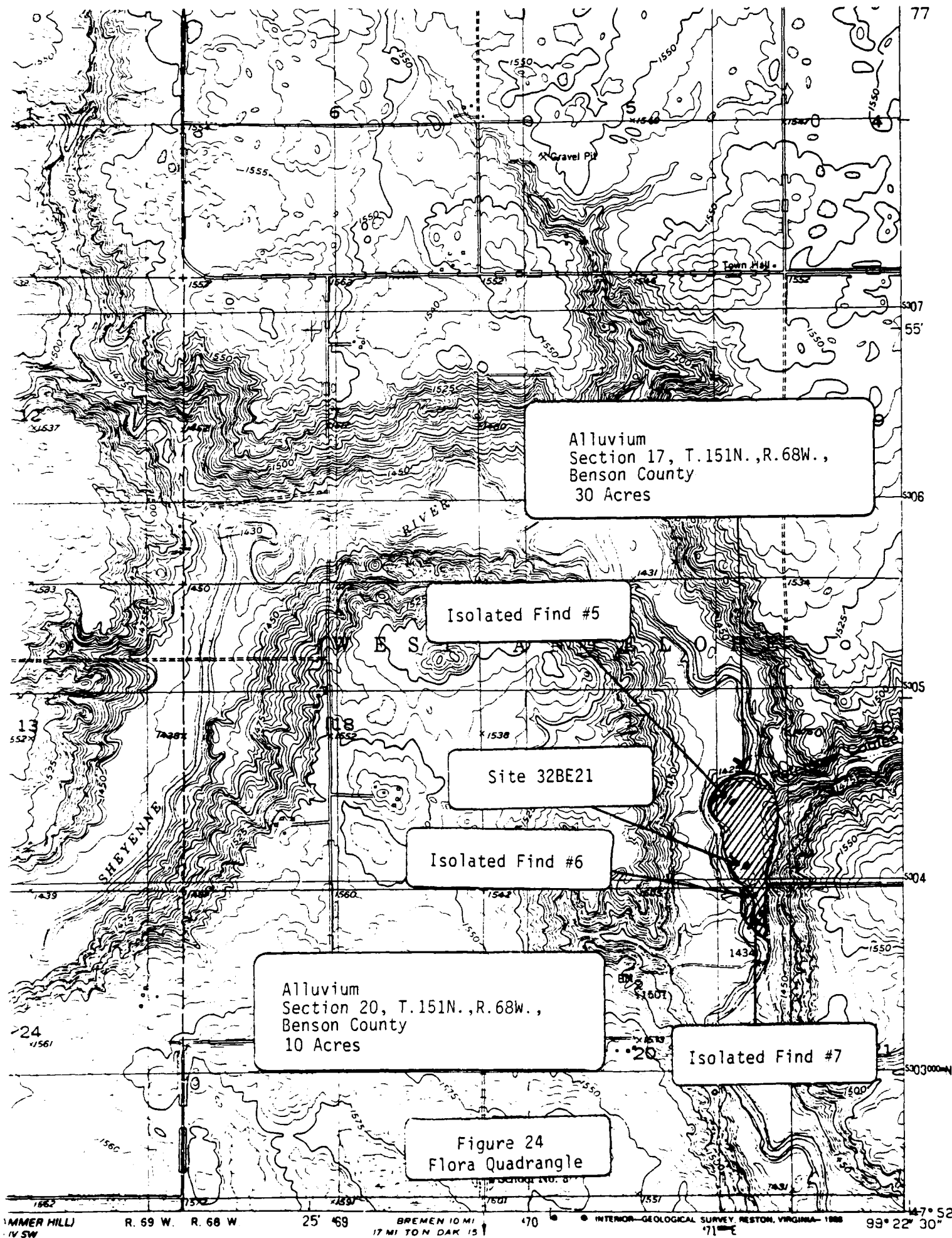
1467

1452

1454

1449

1437



these alternatives. Where this occurred, some of the survey area was credited to each alternative listed.

Table 4 defines the total acreage for each of the alternatives and relates this to the statistical sample. Powers attempted to sample equal percentages of each plan. However, choosing specific landforms sometimes influenced the number of acres surveyed for each alternative. In some cases the length of the channel influenced the amount of survey. Also, some alternatives have higher priorities than others. For this design, all of Plan 7, including alternatives 7A-F, 7A, and 7B-D, have been lumped together. According to the Corps, Plan 7, especially the channel connecting East Devils Lake to Stump Lake (7A-F), may be built first. Therefore, this alternative was most intensely examined by Powers, representing 30% of the sample acreage. The other alternatives had samples of between 230 acres and 340 acres inventoried, representing between 14% to 21% each of the total survey area for the channelization plans. Table 4 shows the total acreage for each plan, determined by estimating a 200 ft corridor for the length of each channel. The next figure indicates what percent of the total acreage, for all the plans combined, each channel alternative represents. Note that the sample acreage closely corresponds to this figure. For example, Plan 5C represents 13% of the total acreage for the channel alternatives combined and was 14% of the sample survey acreage. The only discrepancy here is for Plan 6, which represents only 18% of the survey area although it totals 25% of the possible total channel corridor area. This was because some of the acreage for Plan 6 was counted under Plan 7, since they share a common route in places, as discussed above. The number of acres to be sampled along each alternative is given, along with what percentage that represents of the total individual plan acreage. This last figure is not particularly accurate, because the sample does not examine just the 200 foot wide corridor. Instead, the sample includes parcels adjacent to the channels, to take in the various landforms.

Table 5 describes the channel plans by landforms and sample units. It indicates the number of acres of each landform surveyed along each alternative, the percent each landform represents of the total plan acreage (as taken from Table 4), the percent of the landform surveyed for each alternative (from Table 3), the percentage of the landform surveyed for each alternative when compared to the total channelization plans inventory of 1,600 acres, and the percent of the landform for each plan when compared to the total number of acres of that landform to be inventoried for the channel alternatives combined (as shown on Table 1).

In addition to the outlet channels, a related project alternative is raising of the water level of Stump Lake. If channel Plan 7 is constructed, water will be taken from East Devils Lake to fill Stump Lake, raising the level of West

Devils Lake Flood Control Project

Table 5

CHANNEL PLAN SAMPLE UNITS BY LANDFORM

	<u>Acres Surveyed</u>	<u>% of Total Plan</u>	<u>% of Sample</u>	<u>% of Total Sample</u>	<u>% of Total Landform</u>
<u>Plan No. 2</u>					
Terminal Moraine	80	23%	23%	5%	24%
Outwash Plains	0	0%	0%	0%	0%
Outwash Channel	80	23%	23.5%	5%	20%
Lacustrine Deposits	140	40%	41%	9%	33%
Alluvium	40	11%	12%	3%	35%
Subtotal	340	----	100%	----	----
<u>Plan No. 3</u>					
Terminal Moraine	60	20%	22%	4%	18%
Outwash Plains	0	0%	0%	0%	0%
Outwash Channel	120	40%	44%	8%	30%
Lacustrine Deposits	40	13%	15%	3%	9%
Alluvium	50	17%	19%	3%	43%
Subtotal	270	----	100%	----	----
<u>Plan No. 5</u>					
Terminal Moraine	120	48%	52%	8%	35%
Outwash Plains	40	16%	17%	3%	13%
Outwash Channel	0	0%	0%	0%	0%
Lacustrine Deposits	45	18%	20%	3%	11%
Alluvium	25	10%	11%	2%	22%
Subtotal	230	----	100%	----	----
<u>Plan No. 6</u>					
Terminal Moraine	0	0%	0%	0%	0%
Outwash Plains	200	40%	71%	13%	63%
Outwash Channel	80	16%	29%	5%	20%
Lacustrine Deposits	0	0%	0%	0%	0%
Alluvium	0	0%	0%	0%	0%
Subtotal	280	----	100%	----	----
<u>Plan No. 7</u>					
Terminal Moraine	80	13%	17%	5%	24%
Outwash Plains	80	13%	17%	5%	25%
Outwash Channel	120	20%	25%	8%	30%
Lacustrine Deposits	200	33%	41%	13%	47%
Alluvium	0	0%	0%	0%	0%
Subtotal	480	----	100%	----	----

Stump lake about 10 ft and East Stump Lake about 25 ft. This water could then be conveyed by way of plans 7A or 7B-D from West Stump Lake through Tolna Coulee to the Sheyenne River. The Powers sampling design assumed it would not be necessary to conduct an intensive inventory along the shore Stump Lake, based on the results of the literature review (see Section 2.0 of this report). The 1975 UND survey (Schneider et al. 1977) for the U.S. Bureau of Reclamation already examined major portions of the Stump Lake shoreline. The UND results have been incorporated into the current report by Powers, so that the Corps can be provided with data about site locations in this part of the project area.

5.4.2 The Upstream Lakes

Besides the channelization plans, the Corps is considering raising the water level of the chain of six lakes located north of Devils Lake. This would include Sweetwater Lake, Morrison Lake, Dry Lake, Lake Alice, Lake Irvine, and Chain Lake (see Figure 2). They may be raised up to 10 ft in elevation each. If a 200 ft wide corridor was surveyed around each of the lakes, then a total of about 1,600 acres would have to be covered.

According to the project scope-of-work (see Appendix A), only 20% of the Powers inventory was to be concentrated on the upstream lakes, because this may be the least likely project alternative. Since the Powers survey sampled only a total of 2,000 acres, 400 acres were examined around the lakes north of Devils Lake. Of these 400 acres, 360 acres were selected in advance for statistical reasons, while 40 acres were chosen intuitively in the field.

In selecting areas to be surveyed along the lakeshores, various criteria were considered, including lake intakes and outlets, ancient shorelines or back beach areas, peninsulas, highlands, and rim areas between lakes. Since lake levels may be raised 10 ft, areas both directly adjacent to the modern shoreline and areas away from the lakes were sampled.

Table 6 indicates how much of each of the lakes were sampled. The figure for the total acreage for each lake was derived from estimating a 200 ft corridor around their shoreline. The next calculation gives the percentage for the lake size in terms of the total acreage of the upstream lakes which could be considered for survey. Powers attempted to select a sample which correctly weighted the factor of lake size in the assignment of acreage to be surveyed. The sample also attempted to examine equal percentages of each lake. This sample is then shown as a percentage of lake size and as a percentage of the total sample.

Devils Lake Flood Control Project
 Table 6
 UPSTREAM LAKES: STATISTICAL SAMPLE

<u>Lake</u>	<u>Total Acres</u>	<u>% of Total</u>	<u>Sample Acres</u>	<u>% of Lake</u>	<u>Sample % of Total</u>
Sweetwater Lake	400	25%	90	23%	25%
Morrison Lake	150	9%	35	23%	9%
Dry Lake	500	31%	110	22%	31%
Lake Alice	220	14%	50	23%	14%
Lake Irvine	220	14%	50	23%	14%
Chain Lake	<u>110</u>	<u>7%</u>	<u>25</u>	<u>23%</u>	<u>7%</u>
	1600	100%	360	23%	100%

Larson's (1985) geomorphic study is confined to the areas of the channel plans and does not extend north to the upstream lakes area. Geomorphic units adjacent to the lakes were defined during the field work, after inspecting the USGS maps, SCS soil surveys and other geologic studies (i.e. Aronow, 1951) of the area, and making comparisons to topography noted on the ground. The geomorphic units present are terminal moraine which are remnants of the Sweetwater moraine and the flatter, lower relief segments of ground moraine. The ground moraine landform was encountered only along the upstream lakes. It was readily distinguishable during the field inventory due to its low featureless terrain compared to the rugged, rolling areas of the Sweetwater terminal moraine. Most of the areas of ground moraine are immediately adjacent to the lakes. Given the restricted survey of the ground moraine unit, it was not considered to be a landform sampled with the same intensity as the other geomorphic units, and comparisons of site densities with other landforms are considered to be biased by this factor.

Table 7 delineates the exact sample units inventoried during the survey of the upstream lakes region. These survey areas are illustrated, together with site locations recorded by Powers, on Figures 25-30.

Also, at the request of the Corps, at least three abandoned historic homesteads in the upstream lake area were recorded during the Powers inventory. These sites were picked in an arbitrary manner, from a windshield survey. The purpose was to sample a range of historic resources and evaluate their significance.

5.5 RESEARCH HYPOTHESES

The data collected during the survey will be used to test a number of different hypotheses. These are listed below.

1. It is expected that the most number of archaeological sites will be found on landforms noted by Larson as having a high potential for cultural resources locations.

2. It is expected that regardless of landform, most of the prehistoric archaeological sites will be found near permanent sources of water, such as the lakes and the Sheyenne River.

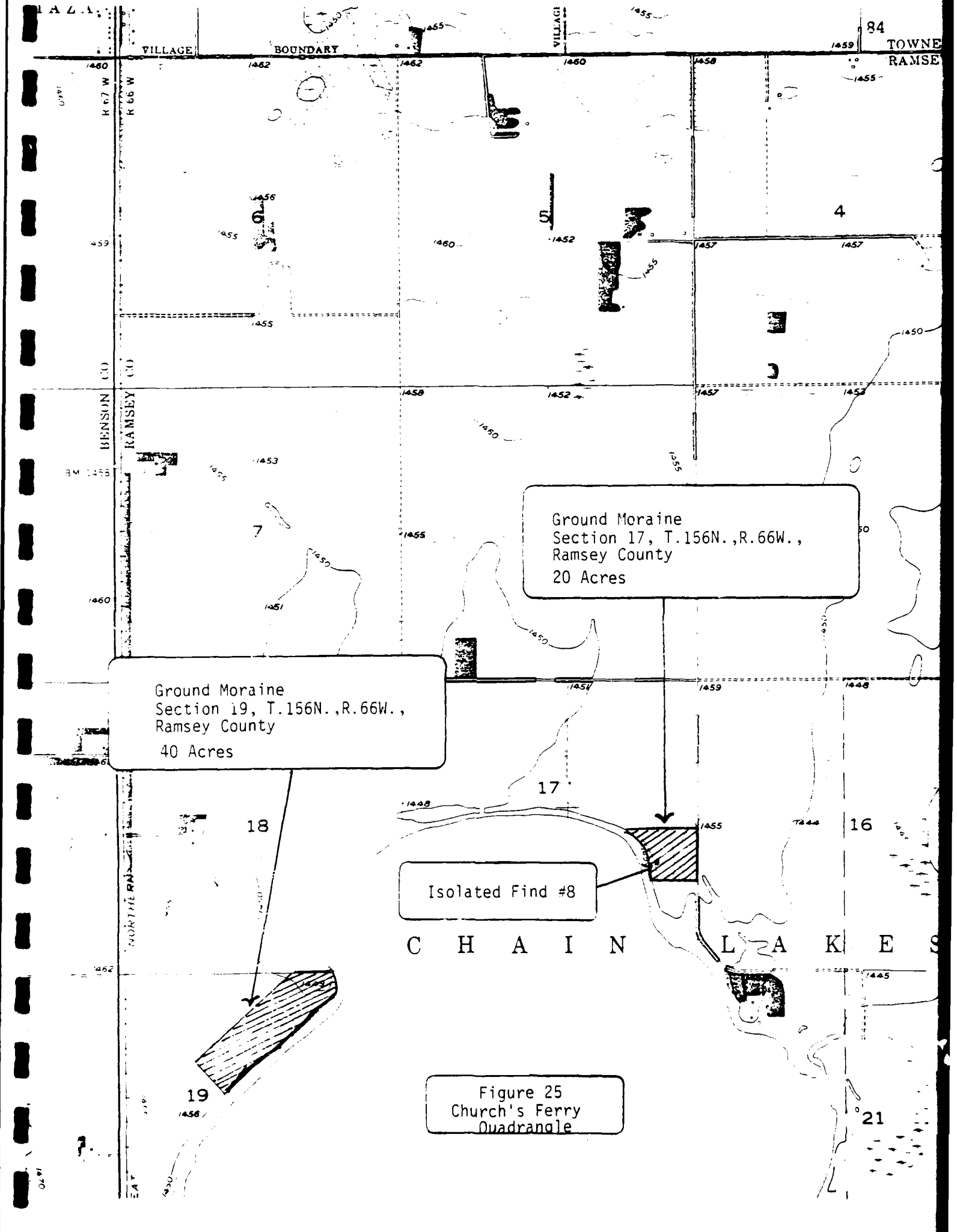
3. It is expected, when examining the channel plan alternatives, that few sites will be found in the bottom of the outwash channels, while the uplands adjacent to these channels will have a higher site density because prehistoric people may have used the ridges paralleling the outwash channels as routes between Devils Lake and the Sheyenne River.

Devils Lake Flood Control Project

Table 7

AREAS SURVEYED - UPSTREAM LAKES

<u>Lake</u>	<u>Topographic Quadrangle</u>	<u>Legal Description</u>	<u>Geomorphic Unit</u>	<u>Acreage</u>
Lake Irvine	Church's Ferry	NW $\frac{1}{4}$ NE $\frac{1}{4}$; E $\frac{1}{2}$ NW $\frac{1}{4}$, Section 19, T.156N., R.66W.	Ground Moraine	40
	Churth's Ferry	NE $\frac{1}{4}$ SE $\frac{1}{4}$, Section 17, T.156N., R.66W.	Ground Moraine	20
			Subtotal	60
Lake Alice and	Cando SE	SE $\frac{1}{4}$ SE $\frac{1}{4}$, Section 1, T.156N., R.66W.	Ground Moraine	40
Chain Lake	Cando SE	E $\frac{1}{2}$ SE $\frac{1}{4}$, Section 18, T.156N., R.66W.	Ground Moraine	35
	Cando SE	N $\frac{1}{2}$ SE $\frac{1}{4}$, Section 23, T.156N., R.66W.	Ground Moraine	20
			Subtotal	95
Dry Lake	Webster	SE $\frac{1}{4}$ SE $\frac{1}{4}$, Section 25, T.156N., R.65W., SW $\frac{1}{4}$ SW $\frac{1}{4}$, Section 30, T.156N., R.64W.	Terminal Moraine	80
	Grand Harbor	SE $\frac{1}{4}$ SE $\frac{1}{4}$, Section 23, T.155N., R.65W., NE $\frac{1}{4}$ NE $\frac{1}{4}$, Section 26, T.155N., R.65W.	Terminal Moraine	30
				110
Morrison Lake and	Starkweather SE	N $\frac{1}{2}$ SE $\frac{1}{4}$, Section 12, T.155N., R.64W.	Terminal Moraine	20
Sweetwater Lake	Sweetwater	Center Section 36, T.155N., R.64W.	Terminal Moraine	40
	Sweetwater	NE $\frac{1}{4}$ NW $\frac{1}{4}$, Section 30, T.155N., R.63W.	Terminal Moraine	40
	Sweetwater	SE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$; NE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$, Section 31, T.155N., R.63W.	Terminal Moraine	10
	Sweetwater	SE $\frac{1}{4}$ SE $\frac{1}{4}$, Section 31, T.155N., R.63W.	Terminal Moraine	25
			Subtotal	135
			Grand Total	400

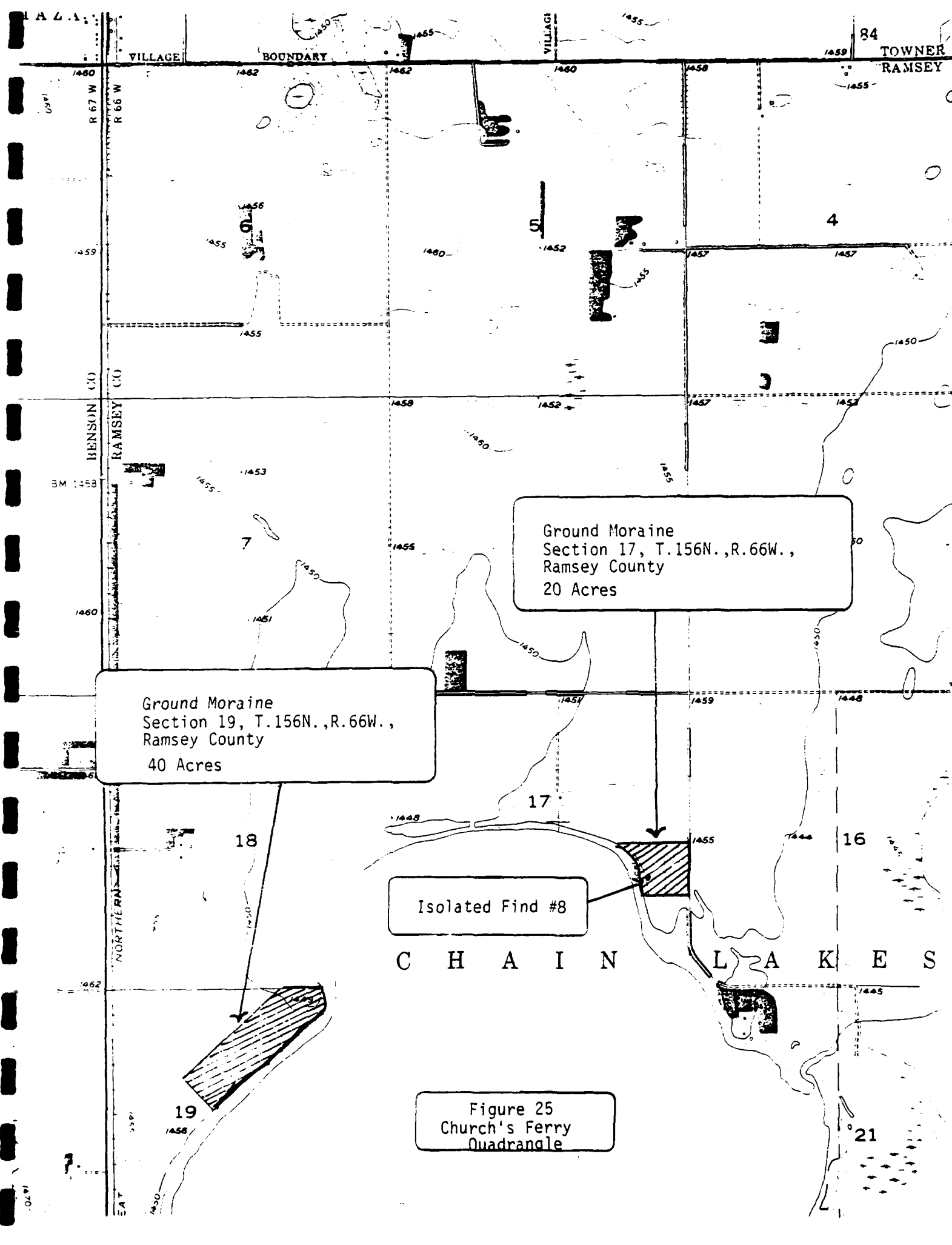


Ground Moraine
Section 17, T.156N., R.66W.,
Ramsey County
20 Acres

Ground Moraine
Section 19, T.156N., R.66W.,
Ramsey County
40 Acres

Isolated Find #8

Figure 25
Church's Ferry
Quadrangle



Ground Moraine
Section 17, T.156N., R.66W.,
Ramsey County
20 Acres

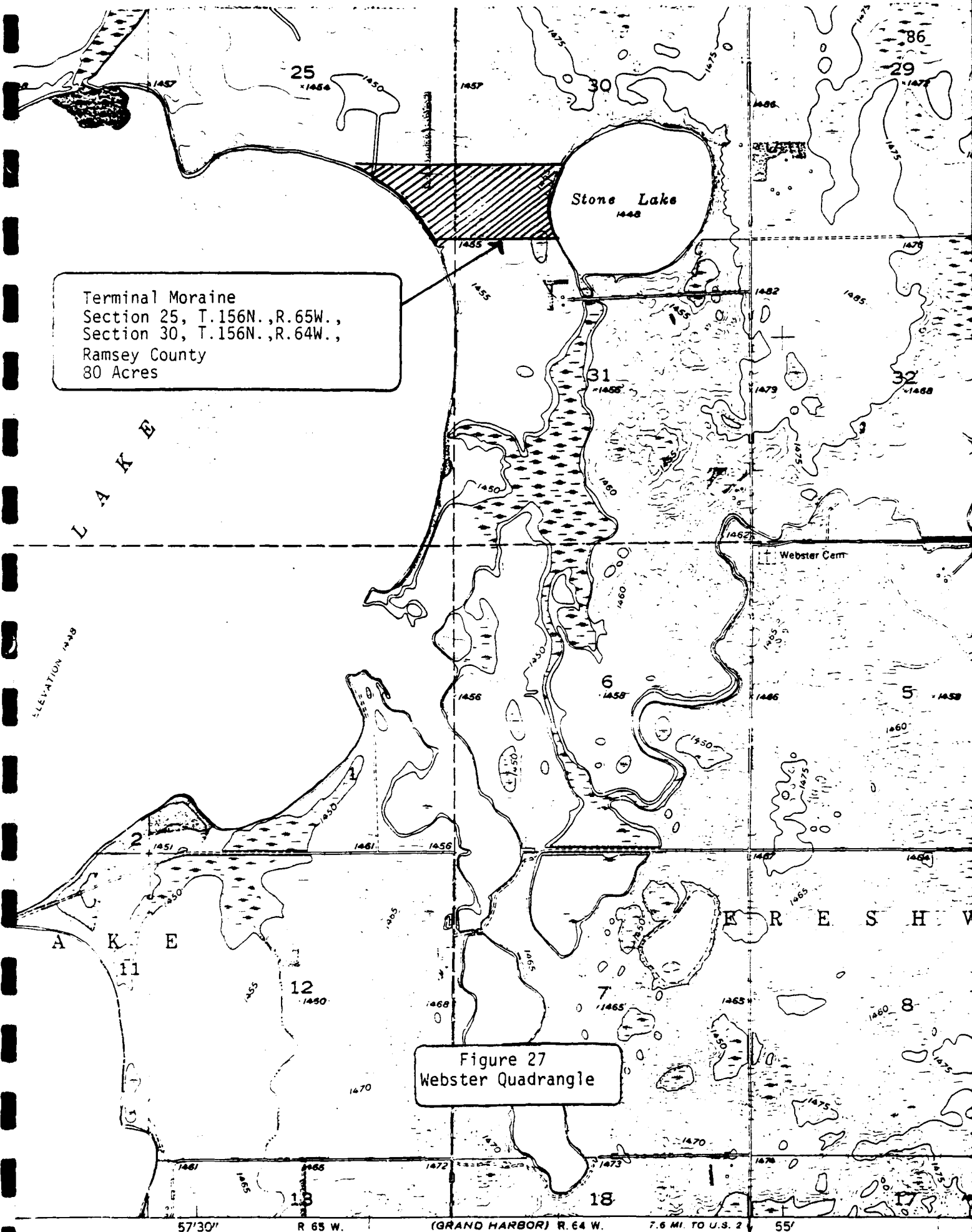
Ground Moraine
Section 19, T.156N., R.66W.,
Ramsey County
40 Acres

Isolated Find #8

Figure 25
Church's Ferry
Quadrangle

Terminal Moraine
Section 25, T.156N., R.65W.,
Section 30, T.156N., R.64W.,
Ramsey County
80 Acres

Figure 27
Webster Quadrangle



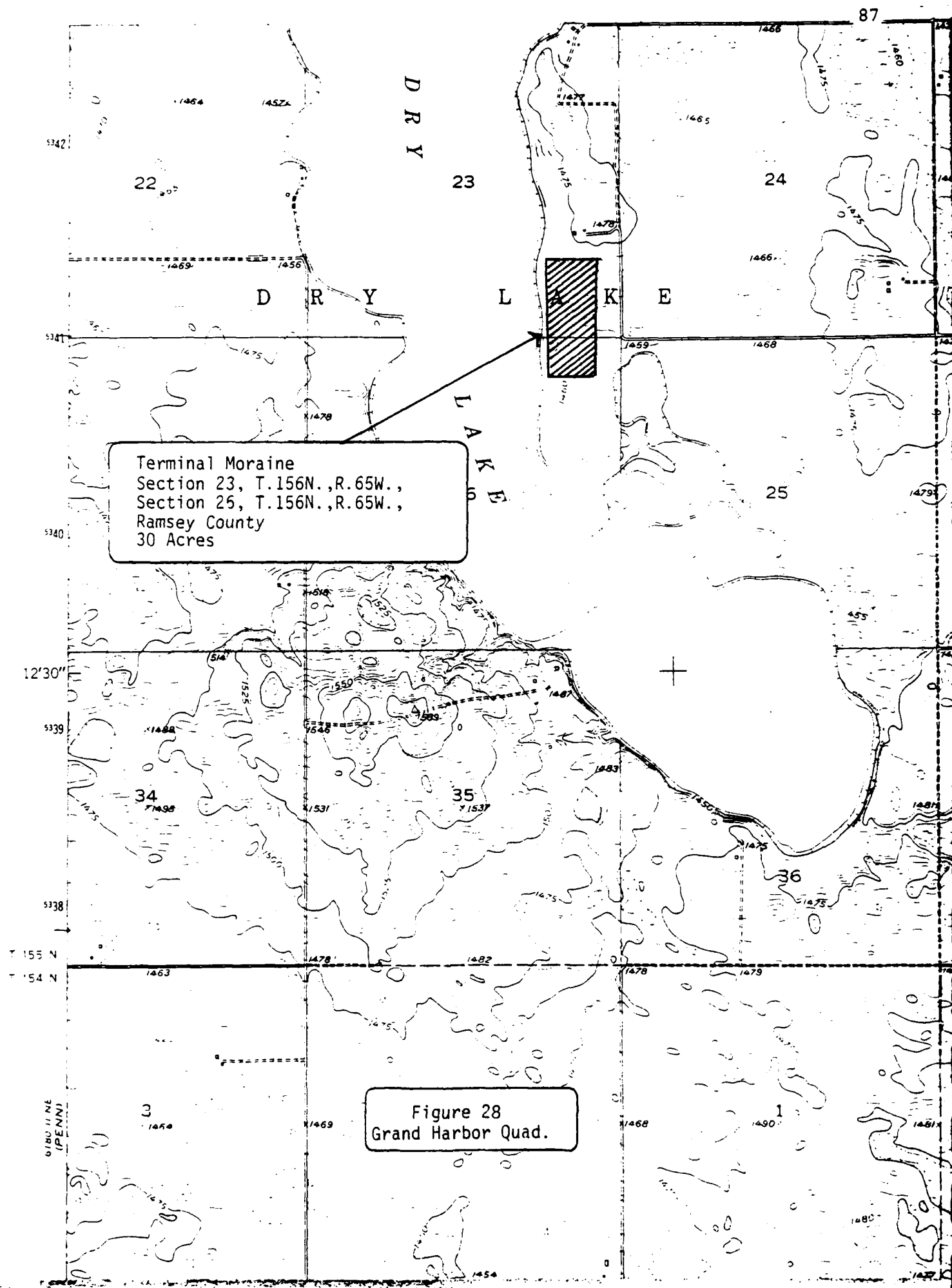
57'30"

R 65 W.

(GRAND HARBOR) R. 64 W.

7.6 MI. TO U.S. 2

55'



Terminal Moraine
Section 12, T.155N., R.64W.,
Ramsey County
20 Acres

Figure 29
Starkweather SE Quad

School No 2

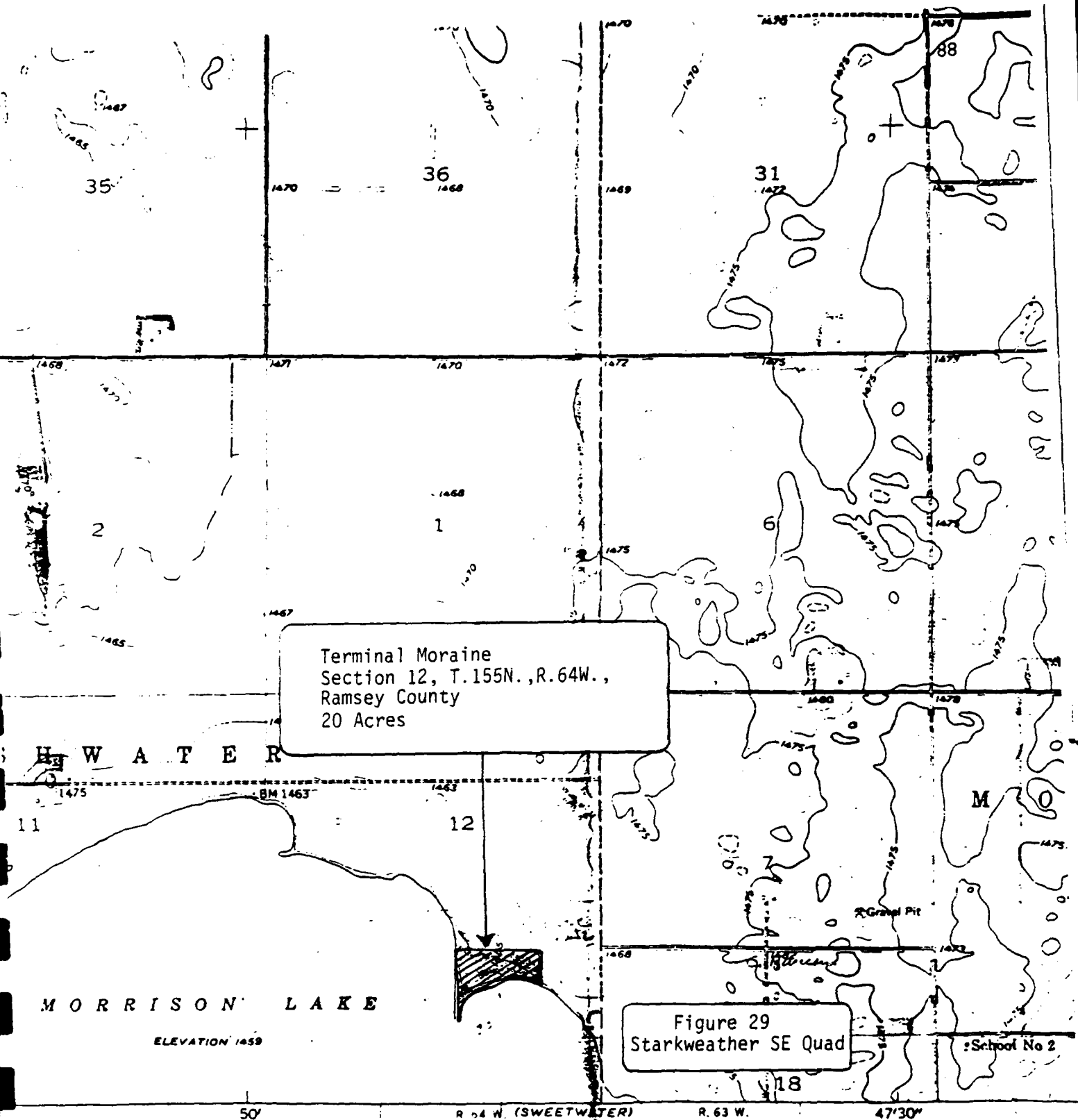
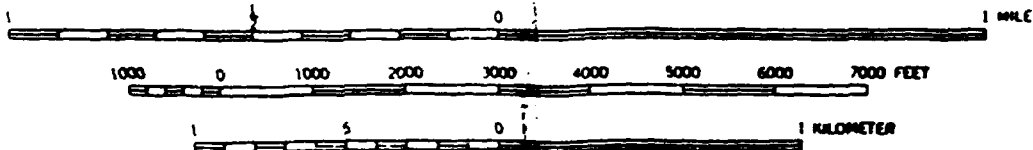
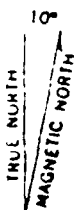
SCALE 1:24,000

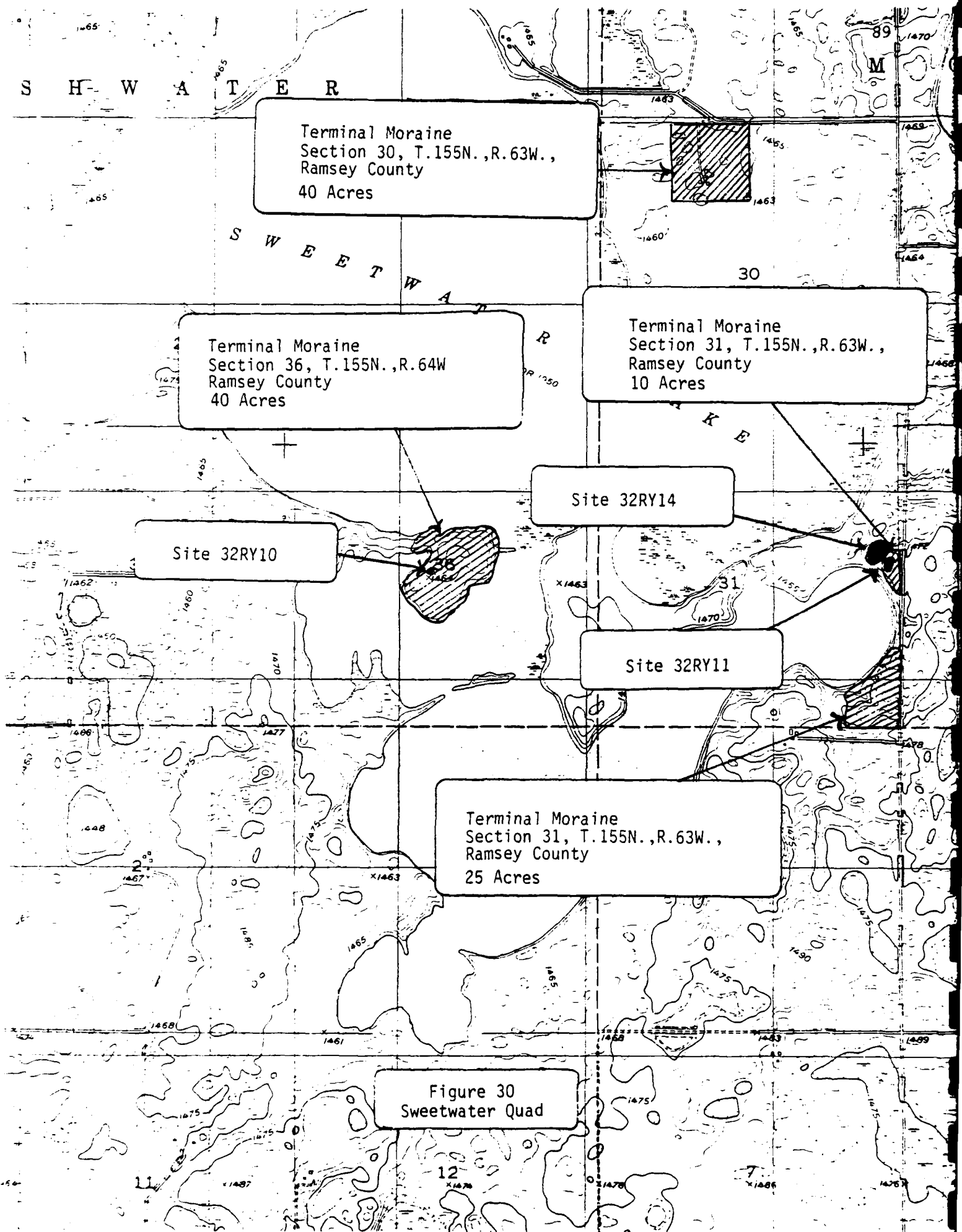
CONTOUR INTERVAL 5 FEET
DATUM IS MEAN SEA LEVEL

NORTH DAKOTA

QUADRANGLE 155N

APPROXIMATE MEAN
DECLINATION, 1957





4. It is expected that areas away from the outwash channels will have a low site density, except where water is found nearby.

5. It is expected that historic sites recorded during the survey will be related to the post-1909 homesteading boom period on the Great Plains, and were abandoned during the Great Depression, by 1940.

6.0 GENERAL PROJECT METHODOLOGIES

The following section will detail the archaeological field methods utilized during the investigations. It will also discuss the laboratory methods used to handle the collected cultural artifacts. The archival research needed to evaluate the historic sites recorded will also be outlined.

6.1 ARCHAEOLOGICAL FIELD METHODS

Field methods consisted of an archaeological survey and limited subsurface testing.

6.1.1 Survey Methodology

The areas for an intensive archaeological survey were selected prior to the field work, using a non-random stratified sampling design, as detailed in Section 5.0. These sample units were first delineated on the engineering drawings supplied by the Corps for the proposed channel plans. The survey areas were also plotted on the appropriate 7.5', U.S. Geological Survey (USGS) topographic quadrangle maps (Figures 9-30). Although no detailed engineering drawings were available for the upstream lakes these areas were also marked on USGS maps.

The sample areas consisted of discrete units of varying size, ranging from as small as five acres to 80 acres. Most units were 40 or 80 acre blocks. For the most part, the block units are easily discerned on the ground by fencelines, roads and natural topography.

The work followed the guidelines for cultural resources inventory projects issued by the State Historical Society of North Dakota (1981). Standard archaeological field methods were utilized (Hester et. al. 1975). The block units were walked by a two-person crew of professional archaeologists. The crew covered each defined parcel using parallel pedestrian transects spaced approximately 20 m apart. In some large tracts of open, fallow fields with excellent visibility, wider 30 m transects were used. In pasture areas or heavily vegetated areas, closer 15 m intervals were the maximum width of the survey transects. In uncultivated areas attention was given to potential stone circle features, as well as the presence of surface artifact scatters. Burial mounds were looked for on hills or uplands, as they are a common site type in the region. Scatters of cultural materials were sought in cultivated fields, since stone circle features were probably removed by local farmers during field clearance prior to plowing. In all areas, cattle trails, rodent mounds, cutbanks, and other erosional surfaces were closely inspected for cultural deposits. This was particularly true in the

sampling of alluvial areas on the Sheyenne River and along the outwash channels. In some places, an Oakfield soil probe was utilized to check for buried soil zones.

For purposes of this survey, a prehistoric site was defined as more than three artifacts located in close proximity to each other (within about a 25 sq. m area), or the presence of a cultural feature, such as a stone circle, mound or hearth. Three or less artifacts were recorded as isolated finds. An historic-archaeological site was defined as the presence of a feature, excluding buildings still standing, or more than three whole historic items. Historic architectural sites were defined by the presence of standing structures. Historic sites post-dating 1960 were noted, but not formally recorded as cultural resources. Once a cultural site was located, the appropriate North Dakota Cultural Resource Survey (NDCRS) form was filled out, according to the guidelines of the SHSND (Snortland-Coles and Perry 1986).

In general, surface artifacts were not collected. Exceptions applied to artifacts considered culturally, temporally or functionally diagnostic which may aid in identification and evaluation of individual sites, or where artifacts are in danger of vandalism. In all cases, summaries of the materials present, lithic types and artifact types were made for each site recorded.

6.1.2 Subsurface Testing Methodology

Subsurface testing conducted by Powers for the Phase I investigation of the Devils Lake area flood control project was very limited. For the most part, field methods were restricted to surface reconnaissance. This is largely due to the nature of the areas surveyed. Most of the sample units were under cultivation, with excellent visibility, or were in short grass pastures. Standard methods of surface survey in these areas were adequate to assess the presence or absence of cultural sites.

In general, only those areas with some potential for deeply buried sites or stratified paleosols were tested. These areas were found only on the outwash channel and the river bottom alluvium along the Sheyenne. In some places along the outwash channels and the Sheyenne River up to two meters of fill cover sterile Pleistocene surfaces (Larson 1986). Given this soil depth, standard shovel probes are of little use. Instead a series of transects were dug using a one inch Oakfield soil probe provided by the Corps.

All areas defined as outwash channels and river bottom alluvium were examined using the Oakfield probe (see Table 1). The remaining landforms surveyed do not have the potential.

In outwash channel areas, transects of probes were placed across the bottoms of the channels. In most instances, 15 m intervals between probes were utilized. Larson (1986) noted infilling of these channels of up to six feet in depth. The channels proved to have less deposition, possibly due to active drainage. The probes were sunk to depths which appeared to be culturally sterile or to Pleistocene outwash gravels.

The use of the Oakfield probe was restricted in some places due to extreme moisture and ground saturation present at the time of the survey in the late fall of 1986 and spring of 1987. In many areas the ground was so wet it was impossible to remove the intact core from the heavy clay matrix. Standing water and marsh also limited the use of the soil probe its usefulness in some areas.

The purpose of the archaeological probing was to check for stratified soils, paleosols, and buried cultural remains. Its greatest utility was to define areas with high site potential by noting the presence or absence of stratified soils. Most of the tested areas did not exhibit buried soil zones. Only at one location along Peterson Coulee at the outlet of Plans 2 were well defined paleosols found.

Areas of alluvium along the Sheyenne River were examined in much the same way, using test intervals of 15 m. The probe was taken to sterile sandy alluvium, over two meters deep in most places. No buried stratified soil zones were noted. Perhaps the paleosols have been destroyed by the meandering course of the Sheyenne River.

6.2 LABORATORY METHODS

The collected artifacts from the Devils Lake area project were divided into generalized categories of prehistoric lithic artifacts and ceramics.

6.2.1 Lithic Artifact Analysis

The artifacts were divided and sorted into generalized tool classes. These classes are defined to include terms and categories of general use in site descriptions. The lithic artifact analysis was performed by Mervin G. Floodman of Powers. The results of the analysis of collected materials can be found in Appendix D of this report.

Patterned Tools

Patterned tools include Projectile points, knives, blanks, preforms, bifaces, endscrapers, and mauls.

Projectile Points

Projectile points are artifacts designed for hafting and propulsion at the missile end of the projectile shaft: either a spear, dart or arrow. It is also recognized that these tools may have served a variety of secondary functions, for cutting, scraping, perforating, etc. (Greiser 1977; Ahler 1970).

The following measurements were taken for projectile points: total length, maximum width, blade edge length, stem length, base width, neck width, notch width, notch depth, shoulder width (all measurements taken in millimeters). Weight was also noted to the nearest 0.1 gram. These same measurements or all applicable elements present were taken for all bifacial implements present.

Knives

Knives are bifacially worked tools designed to operate as cutting edges. This implies a motion parallel to the worked edge with wear characterized by edge rounding and dulling, feature or hinged microspalling, striations and/or polish on one or both sides (Greiser 1977; Ahler 1970).

Blanks

A blank is any piece of lithic material that has been modified to an intermediate stage of lithic reduction sequence in a specified assemblage. The piece must be unfinished with further modification intended. It must also be potentially modifiable into more than one type of finished tool (Bradley 1975).

Preforms

Preforms are raw material pieces modified to an intermediate stage of a lithic reduction sequence in a specified assemblage. The piece must be unfinished and intended for further modification and must have the morphological potential to be modified into a single implement type in the assemblage (Bradley 1975).

Bifaces

Bifaces are relatively thin, worked items which have been modified on both dorsal and ventral surfaces. The flake removal scars may partially or completely cover both surfaces. This is a broad category covering a wide range of cultural materials having several different functions. The artifacts are not complete enough to allow absolute identification of the intended implement. This category is subdivided into biface tips, midsections, bases, and lateral edge fragments.

Endscrapers

Endscrapers are flakes exhibiting secondary retouch on the distal edge opposite the platform and bulb. The long axis of the retouched distal edge is 90° to the long axis of the flake. The maximum width of the retouched distal edge is equal to or less than the maximum length of the flake (Honea 1965). Measurements taken for tools of this class were length, width, thickness, weight, and length of retouched edge.

Grooved Mauls

These implements show signs of having been hafted and used as a hammer, maul or similar implement to beat, pound or smash various materials. They are usually made from a whole rock of cobble. The haft element is the full grove around circumference of the implement. Wear patterns include heavy battered areas on one or both ends. Measurements taken include length, width, thickness and weight.

6.2.2 Prehistoric Ceramics

The prehistoric ceramics were sent to Dr. Ann M. Johnson of the National Park Service for analysis and identification (see Appendix E).

6.3 HISTORIC RESEARCH METHODS

Archival research for the historic sites recorded by Powers for the Devils Lake project was conducted by the Principal Investigator, Mervin G. Floodman. A deed and title search was made for all of the historic resources recorded. The purpose of this was to date the period of occupation at each site. This information was gathered at the various county archives. This included the Benson County Courthouse in Minnewaukan, the Nelson County Courthouse in Lakota, and the Ramsey County Courthouse in Devils Lake. Documents examined included the Abstract of Title books, Deed Records, Mortgages, and other relevant records. The chain of title for each property was then included on the historic site form.

7.0 SURVEY RESULTS

The archaeological inventory of 2,000 acres within the Devils Lake flood control project area resulted in the recordation of a total of 21 cultural sites and 11 isolated finds. Nine of the sites are historic, 11 are prehistoric, and one is multi-component. All of the isolates are prehistoric artifacts. The cultural sites are divided into three basic categories based upon the SHSND site form typology (Snortland-Coles and Perry 1986). These categories are: 1) Historic Architectural sites; 2) Historical Archaeological sites; and 3) Archaeological sites (Prehistoric). The NDCRS site forms are presented in Appendix F of this report. The recorded cultural resources are described below by county and site category. They are listed on Table 8.

7.1 BENSON COUNTY

Two historical archaeological sites, five prehistoric archaeological sites, one multi-component site and six isolated finds were recorded in Benson County by Powers in 1986.

7.1.1 Historical Archaeological Sites

The historical archaeological sites include the remains of a homestead, and a depression and dump site.

32BE15 (Graves Homestead Site)

Site 32BE15 was recorded in the SW1/4NW1/4SE1/4 of Section 1, T.151N., R.64W., on the Tokio (7.5', 1950) USGS topographic quadrangle map (Figure 9) which illustrates a single building at this location. The site is on a terminal moraine deposit, at an elevation of 458 m (1,512 ft amsl). It is about a mile and a half south of the Black Tiger Bay inlet of Devils Lake and about a mile east of the town of Tokio.

This site consists of the remains of an old homestead, covering about 11,102 sq. m. The structures at 32BE15 have been removed. The foundations, depressions and collapsed siding remain, along with a scatter of cultural materials and machinery. Three features were identified. Feature 1 is a depression, 11 m by 4 m, lined by cemented rocks. Feature 2 is a collapsed pile of wood frame siding and boards, 7 m by 8 m in size. Feature 3 consists of a concrete foundation, 9 m by 15 m in dimension. East of the feature is a cultivated field.

The land containing this site was patented by Julia Graves in 1913. Other occupants were John Egan from 1929 to 1946, and Simm Bader from 1945 to the present.

Devils Lake Flood Control Project

Table 8

(CULTURAL RESOURCES RECORDED BY PETERS ELEVATION 1986-1987)

Site #	Site Type	Cultural Affiliation/Age	Location	USGS Topographic Quad/Range Map	Landform	Alternative Plan/Impact	NRHP Evaluation	Recommendations
32HE15	Historic homestead	Euro-American ca. 1913-1950	N43SE3, Sec. 1, T. 151N., R. 64W., Benson County, ND	Tokio, 7.5, 1950	Terminal Moraine	Plan 5C Yes	Not Eligible	No Further Work
32HE16	Historic homestead / Prehistoric stone circles	Euro-American ca. 1913-1930/ Unknown aboriginal	SE3SW3, Sec. 1, T. 151N., R. 64W., Benson County, ND	Tokio, 7.5, 1950	Terminal Moraine	Plan 5C Yes	Undetermined	Test if impacted
32HE17	Prehistoric Rock Ring	Unknown aboriginal	NE3NW3, Sec. 31, T. 151N., R. 65W., Benson County, ND	Sheyenne, 7.5, 1950	Terminal Moraine	Plan 3 No	Undetermined	Test if impacted
32HE18	Prehistoric materials scatter	Unknown aboriginal	N43NW3, Sec. 19, T. 152N., R. 67W., Benson County, ND	Josephine, 7.5, 1951	Terminal Moraine	Plan 2 No	Not Eligible	No Further Work
32HE19	Historic homestead	Euro-American ca. 1914-1923	N43NW3, Sec. 19, T. 152N., R. 67W., Benson County, ND	Josephine, 7.5, 1951	Terminal Moraine	Plan 2 No	Not Eligible	No Further Work
32HE20	Prehistoric stone circles	Unknown aboriginal	N43NE3, Sec. 4, T. 152N., R. 67W., Benson County, ND	Minnowaukan East, 7.5, 1950	Outwash Channel	Plan 3 No	Undetermined	Test if impacted
32HE21	Prehistoric materials scatter	Post-Woodland ca. A.D. 1000-1800	SE3SE3, Sec. 17, T. 151N., R. 68W., Benson County, ND	Flora, 7.5, 1951	Alluvium	Plan 2 No	Undetermined	Test if impacted
32HE22	Prehistoric materials scatter	Unknown aboriginal	SW3NW3, Sec. 19, T. 152N., R. 67W., Benson County, ND	Josephine, 7.5, 1951	Terminal Moraine	Plan 2 No	Not Eligible	No Further Work

Table 8 (cont.)
PAGE 2

Site #	Site Type	Cultural Affiliation/Age	Location	USGS Topographic Quadrangle Map	Landform	Alternative Plan/Impact	NMIP Evaluation	Recommendations
32ED30	Prehistoric materials scatter	Unknown aboriginal	NE $\frac{1}{4}$ SW $\frac{1}{4}$, Sec. 6, T.150N., R.6W., Edley County, ND	Horseshoe Lake, 7.5, 1951	Outwash Plain	Plan 5C Yes	Undetermined	Test if impacted
32NE34	Historic materials scatter	Euro-American ca. 1903-1944	NW $\frac{1}{4}$ SW $\frac{1}{4}$, Sec. 33, T.151N., R.6W., Nelson County, ND	Tolna, 7.5, 1951	Outwash Plain	Plans 6 & 7 No	Not Eligible	No Further Work
32NE35	Prehistoric materials scatter	Unknown aboriginal	SW $\frac{1}{4}$ NW $\frac{1}{4}$, Sec. 19, T.151N., R.6W., Nelson County, ND	Devils Lake Mountain, 7.5, 1950	Outwash Channel	Plan 7A No	Undetermined	Test if impacted
32NE36	Historic homestead	Euro-American ca. 1883-1930	SW $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 19, T.150N., R.6W., Nelson County, ND	Tolna, 7.5, 1951	Outwash Channel	Plans 6 & 7 No	Not Eligible	No Further Work
32NE37	Prehistoric materials scatter	Unknown aboriginal	NW $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 24, T.150N., R.6W., Nelson County, ND	Tolna, 7.5, 1951	Outwash Plain	Plans 6 & 7 No	Not Eligible	No Further Work
32NE38	Prehistoric materials scatter	Unknown aboriginal	SW $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 27, T.152N., R.6W., Nelson County, ND	Perkin, NW, 7.5, 1950	Terminal Moraine	Plan 7A-F No	Not Eligible	No Further Work
32NE39	Historic homestead	Euro-American ca. 1903-1970	NW $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 27, T.151N., R.6W., Nelson County, ND	Tolna, 7.5, 1951	Lacustrine Deposites	Plan 7B-D No	Not Eligible	No Further Work
32RY10	Historic homestead	Euro-American ca. 1939	SE $\frac{1}{4}$ NW $\frac{1}{4}$, Sec. 36, T.155N., R.6W., Ramsey County, ND	Sweetwater, 7.5, 1950	Terminal Moraine	Upstream Lakes No	Not Eligible	No Further Work

Table 8 (cont.)
page 3

Site #	Site type	Cultural Affiliation/Age	Location	USGS Topographic Quadrangle Map	Landform	Alternative Plan/Impact	NRHP Evaluation	Recommendations
32RY11	Prehistoric materials scatter	Blackduck ca. A.D. 500-1700	SE $\frac{1}{4}$ NE $\frac{1}{4}$, Sec. 31, T. 155N., R. 63W., Ramsey County, ND	Sweetwater, 7.5, 1950	Terminal Moraine	Upstream Lakes No	Undetermined	Test if impacted
32RY12	Prehistoric mound	Woodland ca. 100 B.C. - A.D. 1700	NE $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 18, T. 156N., R. 65W., Ramsey County, ND	Cando SF, 7.5, 1957	Ground Moraine	Upstream Lakes No	Undetermined	Test if impacted
32RY13	Historic homestead	Euro-American ca. 1900-1960	NE $\frac{1}{4}$ NW $\frac{1}{4}$, Sec. 7, T. 156N., R. 65W., Ramsey County, ND	Cando SE, 7.5, 1957	Ground Moraine	Upstream Lakes Yes	Not Eligible	No Further Work
32RY14	Historic homestead	Euro-American ca. 1888-1950	SE $\frac{1}{4}$ NE $\frac{1}{4}$, Sec. 31, T. 155N., R. 63W., Ramsey County, ND	Sweetwater, 7.5, 1950	Terminal Moraine	Upstream Lakes Yes	Not Eligible	No Further Work
32RY15	Historic homestead	Euro-American ca. 1890-1960	SW $\frac{1}{4}$ SW $\frac{1}{4}$, Sec. 18, T. 156N., R. 65W., Ramsey County, ND	Cando SE, 7.5, 1957	Ground Moraine	Upstream Lakes No	Not Eligible	No Further Work
I.F.#1	Isolated Find Endscraper	Unknown aboriginal	SE $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 19, T. 150N., R. 60W., Nelson County, ND	Tolna, 7.5, 1951	Outwash Channel	Plans 6 & 7 No	Not Eligible	No Further Work
I.F.#2	Isolated Find Retouched Flake	Unknown aboriginal	NE $\frac{1}{4}$ NW $\frac{1}{4}$, Sec. 12, T. 151N., R. 64W., Benson County, ND	Tokio, 7.5, 1950	Lacustrine Deposits	Plan 5C Yes	Not Eligible	No Further Work
I.F.#3	Isolated Find Core	Unknown aboriginal	NE $\frac{1}{4}$ NE $\frac{1}{4}$, Sec. 4, T. 151N., R. 66W., Benson County, ND	Crow Hill, 7.5, 1951	Outwash Channel	Plan 3 Yes	Not Eligible	No Further Work

Table 8 (cont.)
page 4

Site #	Site Type	Cultural Affiliation/Age	Location	USGS Topographic Quadrangle Map	Landform	Alternative Plan/Impact	NMHP Evaluation	Recommendations
I.F.#4	Isolated Find Flake	Unknown aboriginal	NE $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 33, T.151N., R.66W., Benson County, ND	Sheyenne, 7.5, 1950	Lacustrine Deposits	Plan 3 No	Not Eligible	No Further Work
I.F.#5	Isolated Find Flake	Unknown aboriginal	NE $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 17, T.151N., R.68W., Benson County, ND	Flora, 7.5, 1951	Alluvium	Plan 2 No	Not Eligible	No Further Work
I.F.#6	Isolated Find Ceramic sherd	Plains Village ca. A.D. 900-1800	NE $\frac{1}{4}$ NE $\frac{1}{4}$, Sec. 20, T.151N., R.68W., Benson County, ND	Flora, 7.5, 1951	Alluvium	Plan 2 No	Not Eligible	No Further Work
I.F.#7	Isolated Find Grooved nail	Woodland ca. 100 B.C. - A.D. 1700	NE $\frac{1}{4}$ NE $\frac{1}{4}$, Sec. 20, T.151N., R.68W., Benson County, ND	Flora, 7.5, 1951	Alluvium	Plan 2 No	Not Eligible	No Further Work
I.F.#8	Isolated Find Retouched flake	Unknown aboriginal	NW $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 17, T.156N., R.66W., Ramsey County, ND	Churchs Ferry, 7.5, 1950	Ground Moraine	Upstream Lakes Yes	Not Eligible	No Further Work
I.F.#9	Isolated Find Projectile point	Late Woodland ca. A.D. 1000-1700	SE $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 1, T.156N., R.66W., Ramsey County, ND	Cando SE, 7.5, 1957	Ground Moraine	Upstream Lakes No	Not Eligible	No Further Work
I.F.#10	Isolated Find Utilized flake	Unknown aboriginal	SE $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 1, T.156N., R.66W., Ramsey County, ND	Cando SE, 7.5, 1957	Ground Moraine	Upstream Lakes No	Not Eligible	No Further Work
I.F.#11	Isolated Find Flakes	Unknown aboriginal	SE $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 1, T.156N., R.66W., Ramsey County, ND	Cando SE, 7.5, 1957	Ground Moraine	Upstream Lakes No	Not Eligible	No Further Work

Artifacts Observed:

Machinery at the site includes a grain drill, wagon, horsedrawn wagon with runners (stone beat), and a grain combine. The cultural scatter includes metal buckets, and fragments of glass, crockery, ceramics, etc.

NRHP Eligibility and Recommendations:

The integrity of 32BE15 has been destroyed by the removal of the structures from the site. The buildings were probably torn down after 1950. The site is not associated with important events or people. Further study of the site is not likely to yield information pertinent to regional history, and it is judged ineligible for nomination to the NRHP. No further work is recommended at 32BE15. Channelization Plan 5C may impact or pass close to the site.

32BE19 (Simoy Depression and Dump Site)

Site 32BE19 was recorded in the SE1/4NW1/4NW1/4 and SW1/4NE1/4NW1/4 of Section 19, T.152N., R.67W., on the Josephine (7.5', 1951) USGS topographic quadrangle map (Figure 12). The site lies on terminal moraine, overlooking an outwash channel and Stony Lake to the north, at an elevation of 475 m (1,560 ft amsl).

The site consists of two defined features and an historic cultural materials scatter. Feature 1 is a rectangular depression excavated into the side of the hill north of the cultivated field, measuring 18 m by 8 m. The depression is three meters deep and may have been rock lined. It is filled by modern trash and garbage. Feature 2 is a smaller depression within the cultivated field. Rocks from field clearance are piled around the tree lined depression. Between these features is a wide scatter of historic artifacts.

The land containing site 32BE19 was originally patented in 1914 by John Simoy. It has since been owned by B. Christianson from 1917 to 1919, Olaf Christianson from 1922 to 1923, J&S Wallace from 1951 to 1954, and Donald Almlie from 1954 to present.

Artifacts Observed:

Materials at the site include crockery, white ware china, glass, bottles, tin cans, cardboard boxes, oil filters, oil cans, plastics, window glass, coal etc. No purple glass was observed, indicating that the artifacts probably post-date ca. 1918. The trash is considered to be of recent origin.

NRHP Eligibility and Recommendations:

The site is in poor condition and lacks physical integrity. It contains no standing structures. It is not associated with any famous historical events or people. Site 32BE19 has little potential to add information about the area's history, and is judged ineligible for nomination to the NRHP. The site will not adversely be effected by channel Plan 2, which will be constructed along the outwash channel to the north. No further work is recommended at 32BE19.

7.1.2 Multi-Component Site

One multi-component site was recorded by Powers in Benson County.

32BE16

Site 32BE16 was recorded in the E1/2SE1/4SW1/4 and SW1/4SE1/4SW1/4 of Section 1, T.151N., R.64W. on the Tokio (7.5', 1950) USGS topographic quadrangle map (Figure 9). This site is located within a terminal moraine deposit, just north of Graves Lake, about a mile east of the town of Tokio. Site 32BE16 has both historic and prehistoric components. It covers an area of 33,428 sq. m at an elevation of 459 m (1,500 ft amsl).

The historic component consists of four identified features: three depressions and a poorly defined rock foundation. A fairly dense scatter of historic cultural materials were associated with the rock foundation, identified as Feature 15, on a low sideslope of a hill. Feature 15 is about eight meters across. The three depressions are higher on the hill to the west. Feature 12 is a depression seven meters in diameter, Feature 13 a depression six meters in size, and Feature 14 a depression three meters around.

The land containing this site was originally patented by Julia Graves in 1913. It was sold to John Egan in 1918. The historic site features and materials probably relate to the period of occupation from about 1913 to 1930 judging by the artifacts present.

A total of 11 prehistoric stone circle features were also recorded at site 32BE16. Only one stone circle, Feature 11, is located on the upper most hilltop at the western edge of the site. The remaining 10 prehistoric features are lower in elevation, along the low ridge between the intermittent seasonal ponds at the site. The stone circles are all well defined and range from five to seven meters in diameter.

Artifacts Observed:

No prehistoric cultural materials were observed at site 32BE16. All cultural artifacts are associated with the historic component. These materials include window glass, purple glass, ceramic wares, china, stoneware, crockery, tin cans, bone, etc. Bricks were found on the hill by the depressions. Metal stove parts are plentiful. Many bottle necks and bases are present. One bottle base is very thick and exhibits bubbles. It is printed: "Devils Lake Bottling Company 11-5 AB CO."

NRHP Eligibility and Recommendations:

The site's historic component lacks integrity with no structures remain at the site. Archival research indicates it is not associated with significant historic events or people. Further study of this component would add little to the regional historical picture.

The prehistoric component at site 32BE16 is intact and well preserved. The circles are well defined and imbedded in the sod. The potential for buried materials not observed is good. The significance and NRHP eligibility of the prehistoric component is undetermined pending a subsurface evaluation of the nature and extent of its buried cultural deposits.

The site lies along the route of proposed channel Plan 5C, and it may be impacted by construction activities. Further testing and evaluation of the prehistoric stone circles at 32BE16 is recommended prior to any impact.

7.1.3 Archaeological Sites

Five prehistoric archaeological sites were recorded in Benson County by Powers.

32BE17

Site 32BE17 was recorded in the NW1/4NE1/4NW1/4 of Section 31, T.151N., R.65W., on the Sheyenne (7.5', 1950) USGS topographic quadrangle map (Figure 13). The site is located on a hill crest of terminal moraine, at an elevation of 461 m (1,530 ft amsl). This is the highest point of land in the vicinity, and overlooks the Sheyenne River Valley to the south.

The site consists of a human-made rock ring which is oval in shape. The rock ring measures about one meter around. The feature was formed by piling small cobbles of glacial origin 25 to 30 cm high around the oval. Most of the rocks are cobble-sized, but one is a larger boulder. The center of the

feature is slightly depressed, with much greener grass there than outside the ring. The outside of the ring has been disturbed by badger holes. The landowner thought the site may be a smoke signal station and reported a similar feature on top of Crow Hill. The origin and function of the feature is not known. The site could easily have served as a signal station or lookout given its position and view of the river valley. It could also have been ceremonial in nature representing a vision-quest site. It is possible that this site is prehistoric, but it may also be related to the Devils Lake Sioux reservation era (about 1876-1889).

Artifacts Observed:

No cultural materials were observed at the site.

Significance and NRHP Eligibility:

While exterior areas have been impacted by animal burrows, the feature at 32BE17 remains intact and fairly well undisturbed. Site 32BE17 has the potential to yield important information about regional prehistory as either a vision-quest site or as a signal station. If it is a vision-quest site, 32BE17 may be considered to be of cultural/ceremonial significance under the Native American Religious Freedom Act of 1979. It is considered to be of undetermined eligibility for nomination to the NRHP pending further investigation. It is recommended that prior to impact the site should be tested to determine its function. Site 32BE17 is located well away from the corridor for channel Plan 3, and should not be disturbed by the proposed flood control project.

32BE18

Site 32BE18 is located in the SE1/4NW1/4NW1/4 of Section 19, T.152N., R.67W., on the Josephine (7.5', 1950) USGS topographic quadrangle map (Figure 12). The site is located about 250 m north of 32BE22, on a terminal moraine, at the edge of the outwash channel overlooking Stony Lake to the north. Site 23BE18 is about a quarter mile south and east of Stony Lake, at an elevation of 475 m (1,550 ft amsl).

Site 32BE18 is a sparse scatter of chipped stone artifacts, covering about 2,116 sq. m. It is located in a cultivated field south of a fence line, in a low swale between two rounded hills. All the cultural materials are in the low swale and none on the adjacent hilltops. No diagnostic artifacts were recovered.

Artifacts Observed:

A total of 34 prehistoric artifacts were observed at site 32BE18. The materials are all of chert, predominantly white and a mottled color. Four cores and core fragments were

noted. The rest of the artifacts consist of secondary and tertiary flakes. No finished tools were located.

NRHP Eligibility and Recommendations:

The integrity of site 32BE18 is poor due to cultivation. It is a sparse locus of activity in which contains no diagnostic artifacts. The site is on very shallow glacial loam, with little potential to produce significant information about prehistoric lifeways. Site 32BE18 is believed to be ineligible for nomination to the NRHP. No further work is recommended. The site is located just above the alignment for Plan 2, and should not be impacted by the proposed channel construction.

32BE20

Site 32BE20 was recorded in the NE1/4NW1/4NE1/4 of Section 4, T.152N., R.67W., on the Minnewaukan East (7.5', 1951) topographic quadrangle map (Figure 22). It is situated on a high hilltop of terminal moraine, at an elevation of 461 m (1,500 ft amsl), overlooking an outwash channel. Round Lake is located about 500 m to the northeast and Long Lake is about 360 m to the southwest of the site.

Site 32BE20 consists of three identified stone circle features in an area covering 3,657 sq. m. The features are located on the northern part of the hill. Feature 1 is on the highest point of the hill and is one meter in diameter. A large cairn is found northeast of the stone circle. Features 2 and 3 are lower on the hill to the north. Feature 2 is well defined and is eight meters in size. Feature 3 is also well defined and eight meters around. All are single courses of stone, well imbedded in the sod.

Artifacts Observed:

No cultural materials were observed at the site.

NRHP Eligibility and Recommendations:

The stone circle features at site 32BE20 are intact and retain good integrity. They are well defined and embedded in the soil of the site. The potential for buried remains is good. The NRHP eligibility of site 32BE20 remains undetermined pending a subsurface evaluation to assess the nature and extent of its cultural deposits. The site is located adjacent to channel Plan 3. However, it is high on the hilltop, and well away from the proposed construction impact zone along the outwash channel. The site should not be effected by the Corps' project. It is recommended that this site be archaeological tested to determine its significance prior to impact.

32BE21

Site 32BE21 was recorded in the SW1/4SE1/4SE1/4 of Section 17, T.151N., R.68W., on the Flora (7.5', 1951) USGS topographic quadrangle map (Figure 24). It is within a cultivated field on an alluvial terrace just above the Sheyenne River, about a quarter of a mile south of the mouth of Peterson Coulee. The site lies 120 m east of the current river channel, at an elevation of 437 m (1,430 ft amsl).

Site 32BE21 consists of a sparse scatter of cultural materials, including ceramics, in an area covering 104 sq. m. Overall visibility in the field was excellent at the time of the survey. Four of the six total artifacts were found in the same furrow within five meters of each other. Other cultural materials were found in the field north and south of 32BE21, recorded as isolated finds. I.F. #5, a secondary flake of Knife River flint, was located about 300 m northwest of the site. A ceramic sherd (I.F. #6), and a grooved stone maul (I.F. #7) were found 120 m and 245 m south of the site, respectively.

Artifacts Observed:

Artifacts observed included two small interior flakes of Tongue River silicified sediment and one coarse white chert fragment. These items are non-diagnostic and were left in-situ. Three ceramic sherds were found on the site surface and collected. The ceramics appear to be post-Woodland (about A.D. 1000-1800) in age (see Appendix E).

NRHP Eligibility and Recommendations:

The site surface is disturbed due to cultivation. Cultural materials may extend beneath the plowzone. The NRHP eligibility of 32BE21 remains undetermined pending a subsurface testing program to evaluate the nature and extent of its buried cultural deposits. This testing program should also examine the relationship between 32BE21 and isolated find locations 5, 6, and 7. The site should not be impacted by Plan 2, because the proposed channel follows Peterson Coulee to the Sheyenne River, and the mouth of this coulee is 450 m north of 32BE21. It is recommended that if the project should affect this site, an archaeological testing program should be conducted to clarify its significance.

32BE22

Site 32BE22 was recorded in the NW1/4SW1/4NW1/4 of Section 19, T.152N., R.67W. on the Josephine (7.5', 1951) USGS topographic quadrangle map (Figure 12). It is located on a terminal moraine, at an elevation of 480 m (1,575 ft amsl). The site is above an outwash channel which contains Stoney Lake, located about half a mile to the north.

Site 32BE22 consists of a relatively sparse scatter of lithic materials in a fallow, cultivated field, covering 13,832 sq. m. The majority of the artifacts were found on the west side of a hill, between the hill and fenceline. The hill crest is capped by trees and field clearance rock piles. Northeast of the hill, a smaller concentration of artifacts was noted. The hill may have been a source area for chert nodules, and 32BE22 may represent an area of metal and secondary reduction.

Artifacts Observed:

Observed materials from the main concentration west of the hill include nine total artifacts: one large white chert core, one smaller white chert core, six tertiary flakes white chert, and one bifacially retouched chert flake. Artifacts northeast of the hill include two secondary chert flakes, one large tertiary chert flake and one smaller tertiary chert flake.

NRHP Eligibility and Recommendations:

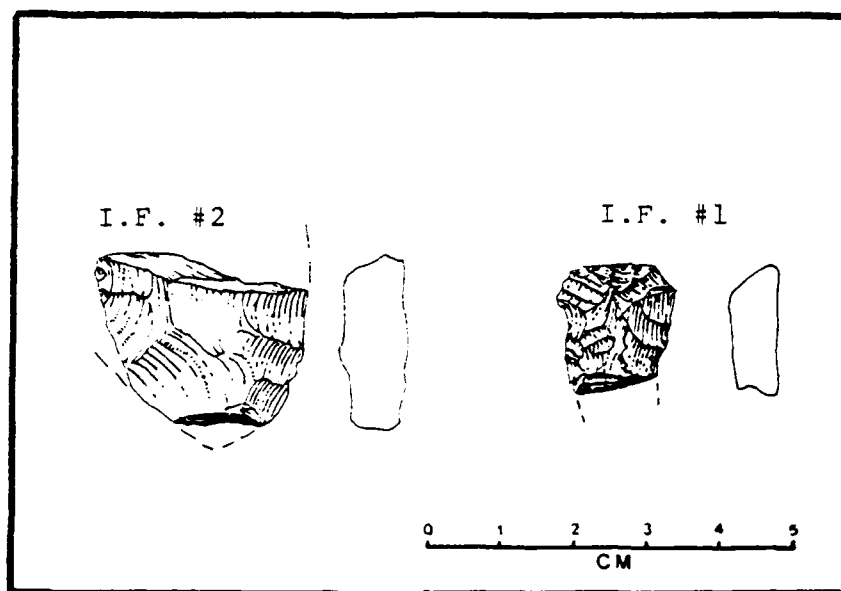
The integrity of the site surface is poor due to cultivation. The potential for finding significant buried cultural materials at 32BE22 is low because of its shallow glacial loamy soil. The site is very sparse locus of activity with no diagnostics and very few tools present. It probably functioned as a lithic reduction workshop, perhaps associated with a quarry on the hill. The likelihood of this site producing information important to regional culture history is low, and, therefore, site 32BE22 is judged to be ineligible for nomination to the NRHP. No further work is recommended. Site 23BE22 is located near the proposed channel Plan 2. However, the site is just above and away from the impact area of the outwash channel and the proposed raised levels of Stony Lake. It should not be affected by construction activities.

7.1.4 Isolated Finds

Six isolated finds were recorded by Powers in Benson County. All were single prehistoric artifacts.

Isolated Find #2

The isolate was recorded in the SE1/4NE1/4NE1/4NW1/4 of Section 12, T.151N., R.64W., on the Tokio (7.5', 1950) USGS topographic quadrangle map (Figure 9). It consists of a large tertiary flake fragment bifacially modified along one lateral edge (Figure 31). It was located in a fallow field on the beach adjacent to Graves Lake. The soils are sandy, pebbly lacustrine deposits. No other artifacts were recovered from the fallow field with excellent visibility. The artifact is along the route of proposed channel Plan 5C. It is not



Isolated Finds Collected

Figure 31

Devils Lake Flood Control Project

considered to be eligible for nomination to the NRHP. The isolate was collected (see Appendix D) and no further work is recommended.

Isolated Find #3

This artifact was found in the SE1/4NW1/4NE1/4NE1/4 of Section 4, T.151N., R.66W., on the Crow Hill (1951, 7.5') USGS topographic quadrangle map (Figure 21). It consists of a cobble-sized core of white chert. The cobble has been decorticated on three sides. Several smaller flakes are removed for platform preparation. The core was located in an open, fallow field adjacent to the east edge of a large outwash channel along the route for Plan 3. Soils are in glacial origin. The artifact is east of several lakes that occupy the outwash channel. The artifact is just outside the area of impact for the proposed channel. The find is not considered significant and no further work is recommended.

Isolated Find #4

This isolate was recorded in the NE1/4NW1/4NE1/4NE1/4 of Section 33, T.151N., R.66W., on the Sheyenne (1950, 7.5') USGS topographic quadrangle map (Figure 14). The artifact is a white quartz secondary flake which is very coarse-grained. The edges are thick and may have been utilized for scraping. Utilization is difficult to discern given the coarse grain of the raw material. It is located in a fallow field of lacustrine deposition. The field encompasses the area where a small ice-blocked lake was created at the terminus of a melting glacier during the Pleistocene. The soils are very sandy and fine. The isolate is about a mile north of the Sheyenne River. It is well outside the route for channel Plan 3 and will not be impacted by the proposed project. It is not significant and no further work is recommended at this location.

Isolated Find #5

This artifact was recorded in the SW1/4SW1/4SE1/4 of Section 17, T.151N., R.68W., on the Flora (7.5', 1951) USGS topographic quadrangle map (Figure 24). It consists of a secondary flake of Knife River flint which exhibits no utilization or retouch. The flake is located in a cultivated field on an alluvial terrace above the mouth of the Sheyenne River, at the mouth of Peterson Coulee. It is about 300 m northwest of site 32BE21. The isolate is not considered significant and no further work is recommended. It is south of where Plan 2 should end.

Isolated Find #6

This isolated artifact was discovered in the NW1/4NE1/4NE1/4NE1/4 Section 20, T.151N., R.68W., on the Flora (7.5', 1951) USGS topographic quadrangle map (Figure 24). It is a single ceramic sherd, located on an alluvial terrace above the Sheyenne River, south of the mouth of Peterson Coulee. It was found in the same cultivated field as site 32BE21 and isolated finds 5 and 7. The sherd has been identified as probably belonging to the Plains Village pattern (see Appendix E), dating from ca. A.D. 900-1800. This artifact is outside of the proposed impact area for Plan 2. The isolate was collected and no further work is recommended in this area.

Isolated Find #7

This isolate was recorded within the SW1/4NE1/4NE1/4NE1/4 of Section 20, T.151N., R.68W., on the Flora (7.5', 1951) USGS topographic quadrangle map (Figure 24). It consists of a fully grooved maul manufactured on a large cobble of glacial granite (Figure 32). It was discovered in the same field, on an alluvial terrace just above the Sheyenne River, about 245 m southeast of site 32BE21. It is well away from the proposed impact area of channel Plan 2. The artifact was collected, so no further work is recommended (see Appendix D).

7.2 EDDY COUNTY

Powers recorded one archaeological site in Eddy County in 1986.

32ED30

Site 32ED30 was recorded in the S1/2NE1/4NE1/4 of Section 6, T.150N., R.63W., on the Horseshoe Lake (7.5', 1951) USGS topographic quadrangle map (Figure 10). The site is on a low rise of an outwash plain, at an elevation of 453 m (ca. 1,530 ft amsl). Soils are a very sandy loam of aeolian origin. Horseshoe Lake is 914 m northwest of the site. It is possible that the site may be related to a prehistoric beach associated with a former higher level of the lake.

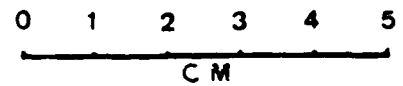
The site is a prehistoric lithic scatter covering 2,700 sq. m. It was found in a cultivated field of immature wheat, adjacent to the west edge of the first line of a windbreak of trees, west of the county road and about 200 m south of the north field trail. The site may extend east across the tree break, but the alfalfa cover was too dense to locate any artifacts in that area.



Isolated Find #7

Devils Lake Flood Control Project

Figure 32



Artifacts Observed:

The cultural materials at site 32ED30 are primarily made of a white chert. No finished tools or diagnostics were found. Artifacts observed included 21 flakes of white chert, two cores of chert, three flakes of Tongue River silicified sediment, and eight quartzite flakes. Some of the pieces exhibit minor retouch. Several large cobbles were noted in the site area, associated with the lithic artifacts, and these may have been manuports.

NRHP Eligibility and Recommendations:

The surface of the site has been disturbed by cultivation. However, the sandy loam soil has some potential for depth, and it is possible that cultural materials could be found intact beneath the plowzone. Site 32ED30 is therefore evaluated as being of undetermined NRHP status, until an archaeological testing program examines the nature and depth of its subsurface deposits. The site lies close to the route for channel Plan 5C and could be impacted by construction activities. If such impacts were to occur, it is recommended that evaluative testing take place prior to construction.

7.3 NELSON COUNTY

Three historical architectural sites, three prehistoric archaeological sites, and one prehistoric isolated find were recorded by Powers in Nelson County during the 1986 survey.

7.3.1 Historical Archaeological Sites

The historical archaeological sites of Nelson County include a foundation, the remains of a homestead, and a trash dump.

32NE34 (Ploud Dump Site)

Site 32NE34 was recorded in the N1/2NW1/4SW1/4 of Section 33, T.151N., R.61W., on the Tolna (7.5', 1951) USGS topographic quadrangle map (Figure 18). The site is situated on an open plain at an elevation of 454 (1,460 ft amsl) and covers 5,551 sq. m. It lies a mile north of Tolna Coulee.

The site consists of an historic cultural material scatter located in a cultivated field. The field was fallow at the time of the survey. The scatter is concentrated around, and mostly east of, a large rock pile resulting from field clearance. There is no evidence of cultural features or structural depressions in the vicinity.

Site 32NE34 was part of a parcel patented by Peter Ploud in 1903. It was sold to Ole Teigen in 1916 who retained

possession of the land until it was sold to Obert Rismon in 1944. The artifacts date to that period of occupation, and the site probably represents a dump area utilized between about 1903-1944.

Artifacts Observed:

The artifacts consist of a wide variety of materials. Purple glass fragments, crockery, burnt glass, aqua glass, a horseshoe, and metal fragments make up the scatter in the field. Within the rock pile is a horsedrawn machinery rake, a disc, and an old gasoline engine.

NRHP Eligibility and Recommendations:

Site 32NE34 is lacking in integrity, and is merely a place where trash was dumped. It was not a homestead location, and no architectural features are associated with the site. The materials present are not significant and the site has little research value. It does not appear eligible for nomination to the NRHP. No further work is recommended at this site. It should not be adversely effected by the proposed channel projects, as it lies well away from the Plans 6 and 7 route in Tolna Coulee.

32NE36 (Paulson Foundation Site)

Site 32NE36 (Paulson Foundation site), was recorded in the SE1/4SW1/4SE1/4 of Section 19, T.150N., R.60W., on the Tolna (7.5', 1951) USGS topographic quadrangle map (Figure 19). The site is located on an alluvial terrace immediately above the Sheyenne River, just east of its junction with Tolna Coulee, at an elevation of 414 m (about 1,325 ft amsl).

The site consists of a raised earthen berm, some 75 cm high, and roughly rectangular in outline. The feature measures about 7 m by 11 m (77 sq. m), oriented at an angle of 320° to 140° from true north along the long axis. The earthen berm is depressed in the center and is about one meter deep. It is filled with brush and is grassed over. The berm is probably the remains of a structural foundation. No evidence of any other foundations or building materials are present.

The land on which the site rests was patented in 1883 by Gabriel Paulson. It is possible that the feature is the remains of a building related to the Paulson homestead, but this cannot be verified. At the present, the site area is utilized as a picnic and fishing area. Modern debris covers the area and several recent camp fire rings with charcoal are present on adjacent areas of the terrace.

Artifacts Observed:

All artifacts at site 32NE36 are related to the modern occupation and use of the location as a picnic/fishing area. Fishing lines, fishing gear, pop and beer cans, plastic plates, cigarette packages, aluminum foil, etc. are the types of material present. None are believed to be associated with the historic earthen foundation.

NRHP Eligibility and Recommendations:

The earthen foundation at Site 32NE36 is well preserved, despite the impact to the site from modern recreational activities. While the feature is intact, the site does not contain significant artifacts related to its historic period of occupation. The deed and title search revealed associations of historical importance. The feature has little architectural value, and the site is believed to have a low potential for future research. Site 32NE36 is considered ineligible for nomination to the NRHP. No further work is recommended at this site. It should not be adversely effected by channel alignments 6 or 7 as currently planned.

32NE39 (Schmidt Homestead Site)

Site 32NE39 was recorded in the SW1/4NW1/4SE1/4 and NW1/4NW1/4SE1/4 of Section 27, T.151N., R.61W. The site was an historic complex which is clearly shown as two structures, a windbreak, and a road, on the Tolna (7.5', 1951) USGS topographic quadrangle map (Figure 18). It is situated on an open plain about a 1.5 miles south of East Stump Lake, of terminal moraine above former glacial beach, at an elevation of 448 m (1,475 ft amsl).

The site area covers 625,000 sq. m and includes two concentrations of features. One concentration was a former homestead and the other is a trash dump and abandoned machinery area. The structures at the homestead have been torn down or removed. The foundations have been bulldozed into the low, tree lined swale northwest of the former location of the structures. To the northwest, across the fields, is a collection of abandoned cars and machinery. Currently, a wooden frame granary or storage building has been moved onto the site and a wooden windbreak fence is currently being constructed.

The land containing site 32NE39 was homesteaded by Gottlieb Schmidt in 1903. The property has remained in the Schmidt family to the present. The 1951 USGS map indicates that one building was still standing and the other was abandoned by that date. The site area was under cultivation at the time of the survey and most traces of the homestead are gone.

Artifacts Observed:

The cars at the site are a Ford, DeSoto, and Dodge of the 1950-1960s era. A Minneapolis Moline tractor and combine equipment are roughly the same age. The materials bulldozed into the swale includes cement foundations, wooden siding, shingles, glass, metal ceramics, plastics, rubber, etc. All relate to the historic period of occupation (ca. 1903-1951).

NRHP Eligibility and Recommendations:

The integrity of the original homestead has been completely destroyed. None of the features remain intact. As such, the site has no architectural merit. Nor is the site associated with important historical people or events. It has little research potential. The site is therefore believed to be ineligible for nomination to the NRHP and no further work is recommended. The site may be impacted by Plan 7B-D, depending on the channel route selected.

7.3.2 Archaeological Sites

Three archaeological sites were recorded by Powers in Nelson County.

32NE35

Site 32NE35 was recorded within the NW1/4SW1/4NW1/4 of Section 19, T.151N., R.61W., on the Devils Lake Mountain (1950, 7.5') USGS topographic quadrangle map (Figure 16). The site is on open prairie, of terminal moraine, overlooking a deeply entrenched outwash channel to the east and south. It is at an elevation of 456 m (1,490 ft amsl).

The site is a cultural material scatter covering about 2,337 sq. m. Materials are concentrated in a tight area, for the most part, with a few artifacts more widely scattered. Soils are dark brown loams with glacial till content. The site was under small grain cultivation at the time of the survey.

Artifacts Observed:

Only ten cultural artifacts were seen at site 32NE35. Materials include one reddish orange chert interior flake, one Knife River flint secondary flake, one Tongue River silicified sediment interior flake, one white chert retouched and utilized flake, one white chert core and one core fragment, one utilized quartzite flake, one white chert biface fragment and two additional white chert interior flakes. Sixty percent of the materials are white chert and 70% are chert. Other materials, including Knife River flint, Tongue River silicified sediment and quartzite, make up 10% each of the artifact total.

NRHP Eligibility and Recommendations:

Site 32NE35 is disturbed and lacks surface integrity due to modern cultivation. It is not known if the sub-plowzone remains exist. The NRHP eligibility or the site is undetermined pending a subsurface testing program to evaluate the nature and extent of any intact, buried cultural deposits. Site 32NE35 is located outside the channel for Plan 7A and should not be effected by the proposed project. It is recommended that the site be archaeologically tested prior to possible impact, to determine its significance.

32NE37

Site 32NE37 was recorded within the N1/2NW1/4SE1/4 and the W1/2NE1/4SE1/4 of Section 24, T.150N., R.61W., on the Tolna (7.5', 1951) USGS topographic quadrangle map (Figure 19). It is situated on the edge of the northern bluffs overlooking the Sheyenne River, at an elevation of 441 m (1,450 ft amsl). Site 32NE37 lies within a cultivated field, on an outwash plain with sandy loam soils. It was covered by dense stand of unharvested sunflowers at the time of the survey.

The site is a relatively sparse scatter of lithic cultural materials, over about 158,500 sq. m. Most of the artifacts seems to be on the eastern end with only a few to the west. The exact site limits were hard to define in the sunflower field. Soils in visible areas appear to be shallow, extending only 20 to 25 cm in depth.

Artifacts Observed:

The artifacts at site 32NE37 were mostly made of coarse to fine grained white and grey cherts. Also observed were some red and tan cherts. Yellow and red quartzite flakes were present in fewer numbers. Only one Knife River flint artifact was observed. About 45 artifacts were noted at the site. Most materials consist of cores, decortication flakes, and interior flakes. Few tools were present.

Materials collected from the site include two large bifacial knives of a grey chert with white mottling (Figure 33). These artifacts were found on the west end of the site within 30 cm of each other. Also collected were one white chert biface/blank and a retouched flake/scrapper of Knife River flint. These artifacts are described in detail in Appendix D.

NRHP Eligibility and Recommendations

The site is lacking in integrity due to the impact of cultivation on the shallow soils. The presence of gravels indicates that the plowzone extended down to the outwash, gravels below the soil layer. The soil zone has been impacted

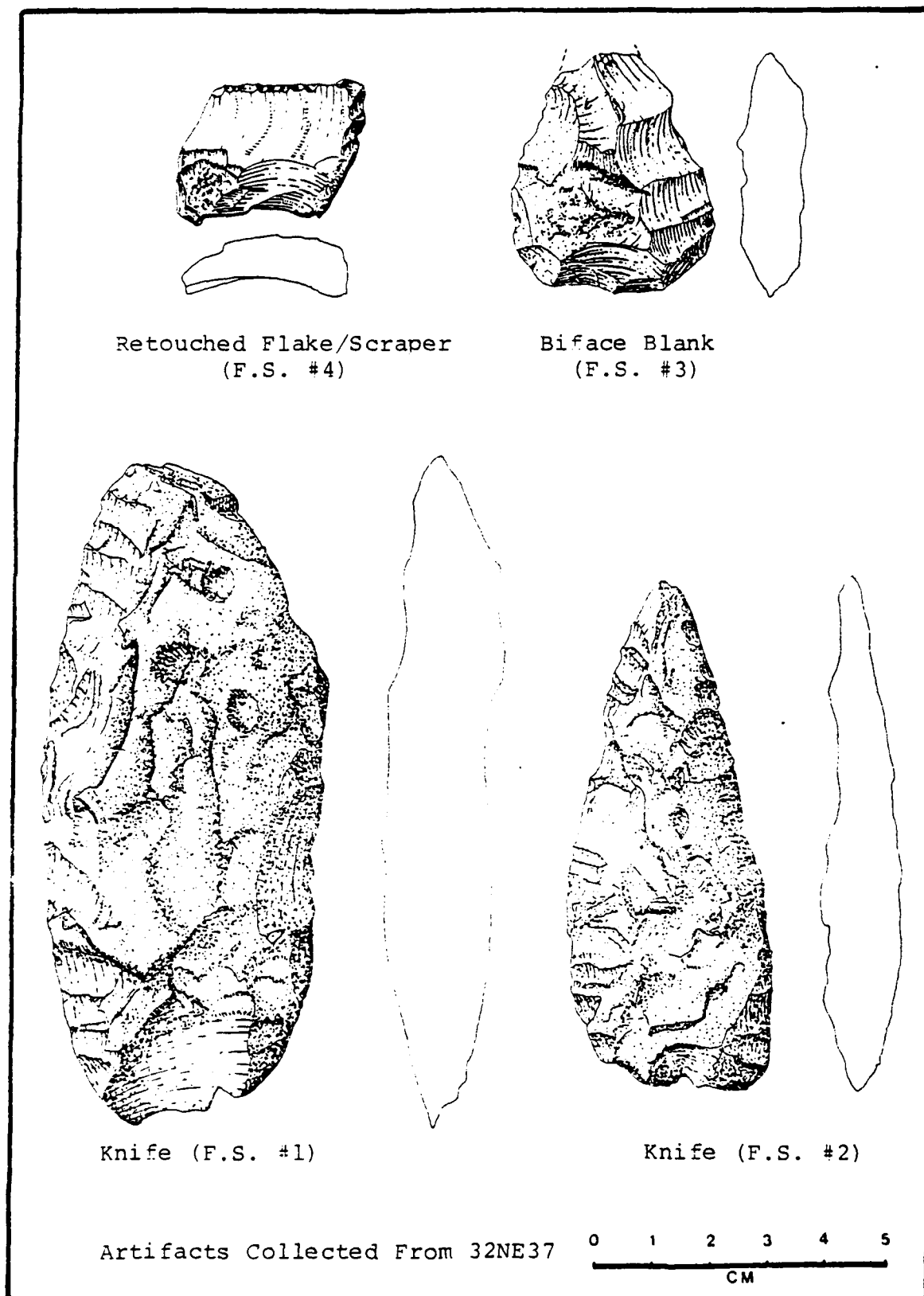


Figure 33

by plowing and the potential for buried cultural deposits at 32NE37 is considered low. Therefore, the site is not believed eligible for nomination to the NRHP, since it has little research value. No culturally diagnostic artifacts were found, and the remains were sparsely scattered over a wide site area. No further work is recommended. The site will not be effected by the proposed channel alignments 6 and 7 as it lies well outside the right-of-way.

Site 32NE38

Site 32NE38 was recorded in the NW1/4SW1/4SE1/4 and NE1/4SE1/4SW1/4 of Section 27, T.152N., R.61W., on the Perkin NW (1951, 7.5') USGS topographic quadrangle map (Figure 17). It is located on a hilltop of terminal moraine, overlooking an outwash channel to the north. Swan Lake is a little more than half a mile to the east. The site is at an elevation of 451 m (1,495 ft amsl).

The site consists of a very sparse lithic scatter covering about 2,730 sq. m. It is situated in a plowed, harvested wheat field. Most of the site was covered by dense weeds and stubble, restricting visibility, at the time of the survey.

Artifacts Observed:

Only four cultural items were noted. These include one retouched coarse chert flake, two tertiary flakes of fine-grained white chert and one shatter flake of fine-grained white chert.

NRHP Eligibility and Recommendations:

The site area is lacking in surface integrity due to modern cultivation. The soils are thin glacial loams. The potential for finding significant subsurface cultural deposits, given the low number of artifacts observed and the shallow soils, is low. The site contain no diagnostic materials. Site 32NE38 is judged as not eligible for nomination to the NRHP because it is not likely to yield important information about prehistory. The site is located above and well away from channel route 7A-F and should not be impacted by the proposed project. No further work is recommended at this location.

7.3.3 Isolated Finds

One isolated find was recorded by Powers in Nelson County.

Isolated Find #1

This artifact was recorded in the SW1/4NE1/4SE1/4SE1/4 of Section 19, T.150N., R.60W., on the Tolna (7.5', 1951) USGS topographic quadrangle map (Figure 19). The isolate consists

of a small plano-convex endscraper of Knife River flint (Figure 32). It was recovered in the rut of a two-track trail on a flat to gently sloping terrace above an intermittent stream tributary of the Sheyenne River. The artifact was located on the north stream bank just west of a low drainage swale. The surrounding area is heavily grassed with stands of buckbrush and sage. The isolate is located well away from the area of Tolna Coulee and the proposed channel routes for plans 6 and 7. The artifact was collected by Powers. No further work is recommended.

7.4 RAMSEY COUNTY

Four historic sites, two prehistoric sites, and four isolated finds were recorded by Powers in Ramsey County. The historic resources consist of one archaeological site and three architectural sites.

7.4.1 Historical Archaeological Sites

The only historical archaeological site recorded by Powers in Ramsey County in 1986 was the remains of a historic cellar.

32RY10 (Taylor Potato Cellar Site)

This site was recorded in the SE1/4SE1/4NW1/4 of Section 36, T.155N., R.64W., on the Sweetwater (7.5', 1951) USGS topographic quadrangle map (Figure 30). It is located on a former peninsula which once jutted out into the southwest portion of Sweetwater Lake, at an elevation of 446 m (1,464 ft amsl). The site sits on terminal moraine, at the bottom of a low, tree-covered knoll, approximately 12 m east from the old shoreline of Sweetwater Lake. As of 1950 the lake was shown with an elevation of 1,459 ft, according to the USGS map, but apparently the water level has dropped since then. A trail passes about 10 m north of the site.

The main feature at site 32RY10 is an elongated depression, 3.6 m by 12 m in dimension, surrounded by a scatter of milled lumber. The landowner stated that the depression was originally a potato cellar, and was about 50 years old. Archival research showed that Charles F. Taylor owned this property in 1939. Trash has been dumped in the depression since its abandonment as a cellar. Most of the materials around the feature are wooden boards of standard construction sizes (eg. 2 x 4", 2 x 6", etc.). The site area covers about 875 sq. m.

Artifacts Observed

The milled lumber contains round nails. Also included in the artifact scatter were several metal buckets, a section of drain trough, parts of an iron stove, and a fragment of a horse collar. The fact that most of the artifacts are construction materials indicates that the modern trash dump resulted from the salvage or destruction of a building in the vicinity of the site.

NRHP Eligibility and Recommendations:

The site has little integrity. It was not associated with a famous event or person, and has no standing superstructures. It will not yield important historical information. Therefore, site 32RY10 is evaluated as being not eligible for nomination to the NRHP. If the lake is raised 10 ft, this site should not be adversely impacted. No further work is recommended at 32RY10.

7.4.2 Architectural Sites

Three historic architectural sites were recorded by Powers in Ramsey County in 1987.

32RY13 (Swenson Homestead)

Site 32RY13 is located in the NW1/4NE1/4NW1/4 of Section 7, T.156N., R.65W. On the Cando SE (7.5', 1957) USGS topographic quadrangle map (Figure 26) the site is illustrated as two buildings (one abandoned). The site is situated on a terrace of ground moraine, above the northeastern edge of Chain Lake, at an elevation of 446 m (ca. 1,460 ft amsl).

The site, as defined, covers about 15,750 sq. m. It consists of two standing architectural features. Feature 1 represents the residential structure. The building is wood frame with horizontal wooden siding that is continuing to deteriorate. Feature 2 represents a chicken coop or storage shed. It is also of wood but has vertical siding. This feature is also in fair condition and deteriorating. Other features have been torn down and removed and most of the old yard is now under cultivation.

A Homestead Certificate for the property containing this site was filed by Arant Swenson on April 12, 1900. Since that time, it has passed to Peter Heien in 1922, Elvin Hoystad in 1946, and was acquired by its current owners Joel and Donna Storsteen in 1974.

Artifacts Observed:

The cultural material scatter at the site is not particularly dense. It includes ceramics, glass, metal, plastic, fragments of cement foundations, and wood, all relating to the historic occupation of this location.

NRHP Eligibility and Recommendations:

The site is typical of homestead sites in the area. It is not unique or of particular architectural merit. Site 32RY13 is not associated with any important historical people or events.

The site is therefore believed not to be eligible for nomination to the NRHP. No further work is recommended. It appears that if the water level of Chain Lake is raised 10 ft this site may be impacted.

32RY14 (Emory Homestead)

Site 32RY14 was recorded in the S1/2SE1/4NE1/4 of Section 31, T.155N., R.63W. It is illustrated as three buildings (two abandoned) on the Sweetwater (7.5', 1950) USGS topographic quadrangle map (Figure 30). The site is situated on a terrace of terminal moraine, above the east side of Sweetwater Lake at an elevation of 449 m. It covers an estimated area of 14,884 sq. m.

The site consists of three standing structures. Feature 1 is a wood frame barn with horizontal wood siding. Feature 3 is a wooden poultry house. It is attached to Feature 4, a wood frame garage. All of these features are in fair condition but continue to deteriorate. Also associated is Feature 2, a remnant concrete foundation. Feature 5 is the remains of the main dwelling which has been removed. It is represented by a faint foundation and concrete steps.

The original Homestead Certificate for this property was filed by Charles Bellgard on June 10, 1884. It was sold to Amos Emory July 29, of 1885. In November, 1900, it was sold to Albert Robers. Subsequent owners are Ruth Perkins and F.J. Roberts in 1929, F.J. Roberts in 1943, Margaret Egle in 1947, and its current owners John and William P. McCarthy in 1981.

Artifacts Observed:

Few artifacts were observed. They include ceramics, glass, masonry and metal, all related to the historic occupation of this site.

NRHP Eligibility and Recommendations:

Overall, the site is in fair condition. However, the three remaining structures are deteriorating. Some of the former buildings at this site have been torn down or removed entirely. The site is not unique or architecturally significant. It is not associated with important historical personages or events. It is therefore believed to be ineligible to the NRHP. No further work is recommended at site 32RY14. It may be impacted if the level of Sweetwater Lake is raised 10 ft.

32RY15

Site 32RY15 is located in the W1/2SW1/4SW1/4 of Section 18, T.156N., R.65W. On the Cando SE (7.5', 1950) USGS topographic quadrangle map (Figure 26) it is illustrated as two buildings, one of which is abandoned. It is situated on a hill just east of Chain Lake at an elevation of 444 m (ca. 1,455 ft amsl), on ground moraine. The site covers an area of about 14,884 sq. m.

The site has one standing structure remaining. Feature 1 is the main residence. It has wooden horizontal siding. The roof is many gabled. The structure is weathered and continues to deteriorate. The site exhibits nine other historic features, consisting of concrete and fieldstone foundations and large open depressions, representing the former locations of various outbuildings. These buildings have been removed, burnt or collapsed.

A Homestead Certificate for the land containing this site was filed by Englebret Anderson November 20, 1890. The homestead remained in Anderson's name until 1944 when was bought by Paul Pederson. It has since passed to John Whitnack in 1947, Lyle Schlup in 1953, Albert and Evelyn Moen in 1967 and to its current owners, Joel and Donna Storsteen, in 1972.

Artifacts Observed:

This site exhibits a moderate scatter of debris associated with its historic occupation. Ceramics, masonry, glass, metal, plastic, rubber and wooden artifacts are present. No machinery is left, but many parts litter the site area.

NRHP Eligibility and Recommendations:

The Anderson homestead dwelling is a good example of vernacular farmstead houses in the region. However, it was not built by a master and has no significant historical associations. The site is in fair condition but is deteriorating. Site 32RY15 is not believed to be eligible for nomination to the NRHP. No further work is recommended. It

should not be impacted by the proposed Corps project as currently planned.

7.4.3 Archaeological Sites

Two prehistoric archaeological sites and four prehistoric isolated finds were recorded by Powers in Ramsey County in 1987.

32RY11

Site 32RY11 was recorded within the SE1/4SE1/4NE1/4 of Section 31, T.155N., R.63W., on the Sweetwater (7.5', 1951) USGS topographic quadrangle map (Figure 30). It is located on a terrace of terminal moraine above the east side of Sweetwater Lake. The site was found in a cultivated field, covering about 4,154 sq. m, at an elevation of 450 m. (1,465 ft amsl). It is adjacent to a fenceline on the west and lies just east of homestead site 32RY14.

The site consists of a prehistoric cultural material scatter containing lithics, ceramics, cracked rock and fragmented faunal remains. The materials are widely scattered with no real concentrations. Deep soil zones were observed, and the potential for buried deposits exists. The site is assessed to be a Blackduck occupation of the Late Woodland period, based on recovered projectile point forms and ceramics. The Blackduck horizon is dated from ca. 500-1700 (Syms 1977).

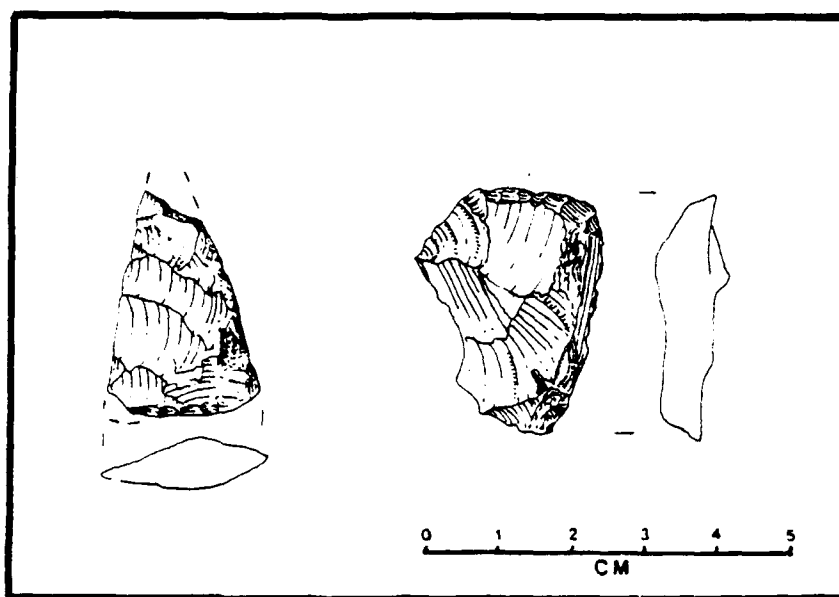
Artifacts Observed:

A total of 23 artifacts were noted at the site, including one ceramic sherd and 22 lithic items. Of the 22 lithic artifacts, 10 were Knife River flint and 12 were chert, predominantly a white medium grade chert. Also present was a scatter of fragmented bone and cracked rocks and large cobbles which may be associated with the prehistoric occupation.

Materials collected at the site include one triangular unnotched projectile point of white chert, one endscraper of Knife River flint (see Appendix D) (Figure 34), and one ceramic rim sherd. The sherd exhibited distinctive combing and punctates similar to ceramics illustrated by Anfinson (1979:32) for Blackduck (see Appendix E).

NRHP Eligibility and Recommendations:

The site area has been disturbed by the modern cultivation. Deep soil zones were noted in the area. The potential exists at this location for intact stratified deposits beneath the plowzone. The significance and NRHP eligibility of site 32RY11 is undetermined pending a subsurface archaeological



Artifacts from 32RY11

Figure 34

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evaluation which can assess the nature and extent of the site's undisturbed cultural remains.

32RY12

Site 32RY12 was recorded in the NW1/4NE1/4SE1/4 of Section 18, T.156N., R.65W. on the Cando SE (7.5', 1957) USGS topographic quadrangle map (Figure 26). This site is located on a small, isolated hill on the eastern edge of Chain Lake, on ground moraine. The hill with the site is the only such rise visible, at an elevation of 446 m (1,460 ft amsl). It appears to be on the second strandline above the modern level of the lake.

Site 32RY12 consists of a conical mound 13 by 14 m in diameter with an area of about 182 sq. m. The mound is badly disturbed and in very poor condition from previous pot-hunting and extensive burrowing by badgers. The central area of the mound is depressed and dug out. No cultural materials or bone were observed. The site is probably related to an undesignated Woodland cultural group.

Artifacts Observed:

No cultural materials or bone fragments were observed despite the extensive damage and burrowing.

NRHP Eligibility and Recommendations:

The condition of the mound has been impacted by past relic hunting as well as extensive animal burrowing. Given this disturbance, the site's integrity can be questioned. However, the extent of the destruction is hard to assess. Site 32RY12 is of undetermined NRHP eligibility. It should be tested to ascertain the nature and extent of its undisturbed deposits prior to any adverse effects. It does not appear that the proposed Corps project will have a negative impact on this site.

7.4.4 Isolated Finds

Four prehistoric isolated finds were recorded by Powers in Ramsey County in 1987.

Isolated Find #8

The isolate was located within the SE1/4NW1/4NE1/4SE1/4 of Section 17, T.156N., R.66W., on the Churchs Ferry (7.5', 1950) USGS topographic quadrangle (Figure 25). The artifact is a retouched and utilized tertiary flake of quartzite. It exhibits retouch on one lateral edge on the ventral surface. It was found in a cultivated field of ground moraine, along the northeastern edge of Lake Irvine. This spot appears to

be on the second or third strandline above the modern lake level, and it should not be impacted by the proposed project. The isolate is not significant and no further work is recommended.

Isolated Find #9

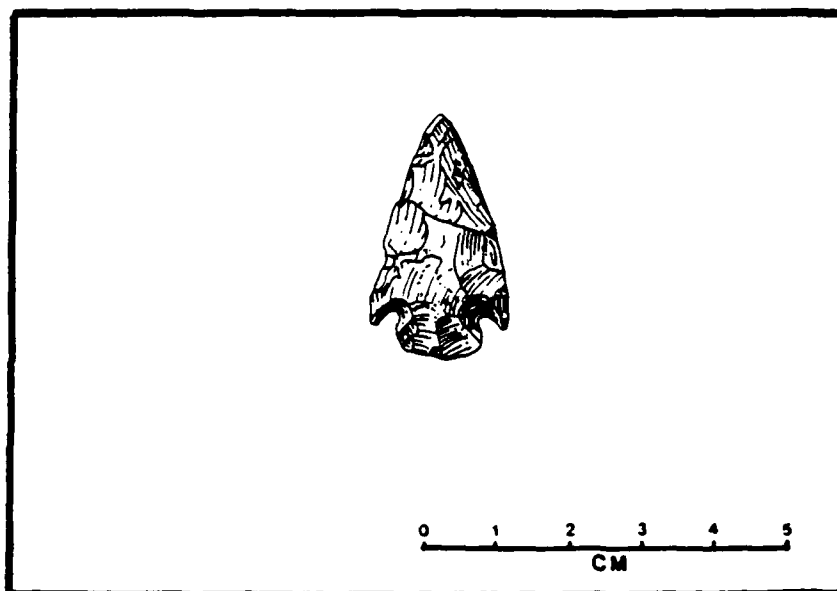
This artifact was discovered within the NW1/4SW1/4SE1/4SE1/4 of Section 1, T.156N., R.66W., on the Cando SE (7.5', 1957) USGS topographic quadrangle map (Figure 26). The isolated find is a complete corner-notched projectile point of tan chert (Figure 35). It is typical of Late Woodland assemblages. The point was located in a cultivated field of ground moraine on a strandline above the current level of Chain Lake. The artifact was collected (Appendix D) and no other work is recommended.

Isolated Find #10

The isolated find was located on ground moraine within the center of the SE1/4SE1/4 of Section 1, T.156N., R.66W., on the Cando SE (7.5', 1957) USGS topographic quadrangle map. It consists of a single tertiary flake of white chert which has been extensively utilized along both lateral margins. The was found in a cultivated field on the eastern edge of a higher hill above the northern end of Chain Lake, high above the proposed 10 ft increase in the elevation for this lake. The artifact is not eligible for the NRHP, and no further work is recommended.

Isolated Find #11

This isolate was recorded within the NW1/4NW1/4SE1/4SE1/4 of Section 1, T.156N., R.66W., on the Cando SE (7.5', 1957) USGS topographic quadrangle map (Figure 26). The find consists of two flakes of Knife River flint located within one meter of each other. One is a secondary flake and one is a tertiary flake. Both are unretouched and unutilized waste debitage. They were discovered in a cultivated field of ground moraine, above a seasonal pothole on the west side, north of Chain Lake. This isolated find does not qualify for the NRHP and will not be impacted by the proposed action. No further work is recommended.



Isolated Find #9

Figure 35

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8.0 EVALUATIONS AND ANALYSES

The major goal of the current investigations, as defined by the Corps (U.S. Department of the Army 1986), was to collect archaeological data which could be compared with Larson's (1986) geomorphic study to create a probabilistic model for prehistoric site locations on defined geomorphic landforms in the Devils Lake Basin. The Powers sampling design concentrated on six of the major landforms within the project area. The following section will examine the results of the survey, incorporate information about previously recorded cultural resources, analyze the potential for specific landforms to influence prehistoric settlement patterns, and make general statements concerning site locations within the defined geomorphic landform units of the proposed flood control alternatives.

8.1 ANALYSIS OF THE POWERS SURVEY RESULTS

As defined by the Powers research design (see Section 5.0), the five major landforms sampled along the channelization plans included terminal moraine, outwash plains, outwash channels, Lacustrine deposition, and alluvium. The channel plans accounted for 80% of the area surveyed. Along the upstream lakes area, two landforms were sampled: terminal moraine and ground moraine. The upstream lakes totaled 20% of the survey area.

A total of 21 cultural sites were recorded by Powers during the Phase I inventory conducted in 1986 and 1987 for the proposed Devils Lake flood control project. Of these, 12 contain prehistoric cultural components and the remaining nine are strictly historic sites. The analysis of geomorphic relationships to landforms was focused on the 12 prehistoric sites. It is believed that Euro-American cultural practices probably transcended dependence on geomorphic units and it is assumed that historic sites can be found on any landform.

8.1.1 Site Location and Geomorphic Landform Relationships

The Powers cultural resources inventory examined a total of 2,000 acres. The acreage was broken into survey units to sample six identified geomorphic landforms. Given the various project alternatives and the restricted occurrence of some of the landforms, equal amounts of each landform were not surveyed. The geomorphic sample units ranged from 585 acres, or 29% of the total, for terminal moraine, to 115 acres, or six percent, for alluvium. Outwash plains totaled 320 acres, or 16%; 400 acres of outwash channels, or 20%; 425 acres of lacustrine deposition, or 21%; and 115 acres of ground moraine, or six percent of the total survey.

A total of 12 prehistoric archaeological sites were recorded during the Powers inventory. Half of these sites were located on terminal moraine, while none were located on lacustrine deposits. Two each, or 17%, were located on outwash channels and outwash plains, while one each, or eight percent were located on alluvium and ground moraine.

Table 9 presents a chi-square statistical test for the independence of site locations relating to geomorphic landforms. The working hypothesis was that site locations are independent of geomorphic units. Also considered were the total number of acres of surveyed for each landform, which directly influenced the expected site frequency within a geomorphic unit.

As shown in Table 9, the hypothesis can be accepted. In other words, based on the Powers survey of the Devils Lake area, no preference was shown for archaeological sites to be located on any specific landforms. The greatest amount of variance in the chi-square equation was found in the cell for lacustrine deposits, which have no recorded sites and an expected frequency of 2.5 sites, and the terminal moraine cell with an observed frequency of six sites and an expected frequency of only 3.5 sites. However, this variation is not great enough to provide a valid statistical significance to prove dependence of site location or absence from any of the geomorphic landforms involved.

Therefore, based on the results of the current survey sample, it is logical to assume that more sites may be located on terminal moraine and few on lacustrine deposits, while, in general, sites will be found on all landforms. This is due in part to the fact that terminal moraine was the most common landform surveyed in the project area. No statistically valid model can be developed to show a preference for site location for any specific landform which cannot be attributed to random chance. This conclusion may be biased by the small size of the overall sample survey.

8.1.2 Site Density

The 12 archaeological sites recorded by Powers represents an overall prehistoric site density of one site for every 166.7 acres surveyed. For the channelization plans site density was one site in every 160 acres of survey, while in the upstream lakes region a prehistoric site was found once in every 200 acres.

In terms of the geomorphic units surveyed, site densities were more variable. One site was recorded in every 97.5 acres of survey on terminal moraine. Outwash plain site density was one site in each 160 acres; outwash channels produced one site in every 200 acres; lacustrine deposits yielded no sites in

Devils Lake Flood Control Project

Table 9

CHI-SQUARE TEST OF INDEPENDENCE
OF SITE LOCATIONS AND GEOMORPHIC LANDFORMS

	<u>Terminal Moraine</u>	<u>Outwash Plain</u>	<u>Outwash Channel</u>	<u>Lacustrine Deposition</u>	<u>Alluvium</u>	<u>Ground Moraine</u>	<u>Total</u>
Number of Sites	6 (3.5)	2 (1.9)	2 (2.4)	0 (2.5)	1 (0.7)	1 (0.9)	12
Acres of Survey	585 (587)	320 (320)	400 (400)	425 (422)	115 (115)	155 (155)	2000
Total	591	322	402	425	166	156	2012

Null Hypothesis: Site locations are independent of the geomorphic landforms on which they are found.

fo (fe)

Degrees of Freedom = 5

Significance Level = .05

χ^2 critical region \geq 11.07

χ^2 calculated = 4.62

Conclusion: accept H_0 : site locations are independent of geomorphic landforms.

425 acres; one site in each 115 acres was found on alluvium; and one site was recorded in each 55 acres surveyed of ground moraine.

The most surprising of these statistics is the low site density in the upstream lakes region. Most of the 400 acres surveyed in this area were adjacent to permanent sources of water, in the form of the lakes. A higher density of prehistoric occupation was expected because of this. However, it must be noted that the sample size along the upstream lakes was very small, and a very low percentage of actual lakeshore was inventoried. More extensive survey around these lakes may well increase site densities. Also, these lakes were not covered by Larson (1986) or geomorphic studies (ie. Aronow 1963) and the prehistoric levels of these bodies of water are not known. It may be that sites exist at higher elevations. This will be discussed in more detail later.

8.1.3 Site Types

The most common type of prehistoric site recorded during the Powers survey was cultural material scatters. Eight of 12 sites, or 66.7%, consist of cultural material scatters, all located in currently cultivated fields. The presence of these sites in cultivated fields is significant in that any other feature, such as stone circles, would have been obliterated by plowing, leaving only the scatter of materials. Of the cultural material scatters, four, or 50%, were located on terminal moraine; two or 25%, on outwash plains; one, or 12.5%, on outwash channels; and one, on 12.5%, on an alluvial terrace.

The next most common site was stone circles or tipi rings. Only two stone circle sites were recorded by Powers, representing 16.7% of the prehistoric site total. These sites were in undisturbed prairie areas with no observed cultural artifact scatters. One of these sites was located on terminal moraine and one was found above a large outwash channel.

One prehistoric mound was recorded along the upstream lakes, representing 8.3% of the total sites. This mound is in prairie, but it has been disturbed by animal burrowing and pot-hunting. The mound is located on a ground moraine adjacent to Chain Lake.

The last site is defined as a rock feature site. It consists of a rock ring of unknown function located on terminal moraine overlooking the Sheyenne River Valley. It represents 8.3% of the total prehistoric sites.

From the above data, it is not possible to directly correlate site types to specific geomorphic units. It can be said that cultural material scatters are found over most of the

landforms which have been cultivated. Stone circles and other rock features are associated with terminal moraine, for the most part due to the presence of glacial cobbles which prehistoric people could utilize as weights to hold down the hide covers of their tipis. However, these features could also be present on ground moraine, outwash channels, outwash plains or whenever suitable raw materials, i.e. cobbles, appear in close proximity.

8.1.4 Cultural Affiliations

Like previous surveys in the Devils Lake region (eg. Schneider et al. 1977; Dahlberg et al. 1983), very few of the prehistoric sites recorded by Powers in 1986-1987 yielded diagnostic artifacts which would allow them to be assigned to a specific culture. Of the 12 prehistoric sites only three, or 25%, can be identified by cultural affiliation. Site 32BE21 appears to be a post-Woodland occupation (eg. either Plains Village or Late Prehistoric), tentatively dated between ca. A.D. 1000 and 1800, based on the recovery of a single ceramic sherd. Site 32RY11 is assigned to the Blackduck horizon of the Late Woodland period, dated between about A.D. 500 and 1700, again based on the recovery of a ceramic sherd (see Appendix E). Site 32RY12 is noted as a Woodland tradition manifestation, ranging in age from about 100 B.C. to A.D. 1700, because it is a burial mound.

8.1.5 Relationships to Soil Type

Directly related to the geomorphic landforms, which provide parent material, are the soil types associated with the recorded sites. All of the soils present are of glacial origin or the result of glacial deposition. They are on the Oahe Formation (Larson 1986) of various depths.

Three sites are associated with soils formed on glacial outwash. This includes outwash plains and outwash channels. Soils on these landforms have been defined as Arvilla Sandy loam, Brantford Kensal loams and Hecla Sandy loams. These soils are very sandy and thin. The three sites are cultural materials scatters.

Eight sites were found on glacial moraine deposits. This includes seven sites on end moraines and one on ground moraine. One site each was found on Svea-Buse, Barnes-Bue, Svea-Sioux, and Heindahl-Esmond loams. Barnes-Svea loams occur at four sites. All of these soils are stony to very stony loams. The soils are undistinguishable and uniform on the ground. Two sites on these soils contain stone circles, one site is a rock feature, one site on Svea-Sioux loam is a burial mound, and four cultural material scatters.

One site was recorded on LaDelle silt loam associated with river bottom alluvium. This soil is relatively deep and exhibits a greater potential for cultural materials buried beneath the plowzone than the soils mentioned above. The site is a cultural material scatter with ceramics.

There is little evidence from the Powers survey to allow for the grouping of sites by soil associations. This is not surprising given the close relationship between soil type and landform. Since there is little correlation between archaeological site locations and landform, it seems reasonable to find that prehistoric sites cannot categorically be related to soil types. Half of the sites located on glacial moraine are associated with Barnes-Svea loams, but the significance of this remains to be explained.

8.1.6 Relationships to Water

Permanent water sources within the project area can be divided into two major categories: the Sheyenne River and the various lakes. The largest body of water in the region is the Devils Lake-Stump Lake complex. Other smaller lakes are found between Devils Lake and the Sheyenne River. In addition there are lakes of differing size north of Devils Lake. It was assumed that prehistoric sites would be located relatively close to these lakes. It was also expected that site density would increase with proximity to the Sheyenne River.

Three of the 12 prehistoric sites recorded by Powers were found along the Sheyenne River. One is located on an alluvial terrace, about 120 m from the river's current channel. The other sites are on the bluffs above the river valley. One is on terminal moraine, at a distance of 610 m from the channel, while the other is on an outwash plain some 455 m from the river. These distances to water reflect the size of the Sheyenne River Valley and the course of the modern stream within that valley.

The other nine sites can be discussed in relationship to the numerous lakes in the region. Two sites were found along the upstream lakes, while the other seven were located between the Devils Lake-Stump Lake complex and the Sheyenne River. Of the seven sites south of Devils Lake, two are associated with outwash channels, four with terminal moraine, and one with an outwash plain. These sites have a mean distance to permanent water of 454 m, with a standard deviation of 223.7 m. The sites are not adjacent to modern lake shores. Therefore, the site locations may reflect changes in prehistoric lake levels. A good deal of variance is reflected by the high standard deviation.

The two sites on the upstream lakes are located much closer to permanent water. These sites are each 60 m from current

lake shores. The discrepancy in distance to water between the upstream sites and the sites south of Devils Lake is not clearly understood, but may reflect the small sample size, the fact that survey areas for the upstream lakes were closer to modern shorelines, less previous variation in the size of the upstream lakes, and lack of extensive survey along the lower lake shores in the channel plan areas.

8.1.7 Historic Sites

The Powers inventory of portions of the Devils Lake flood control project area also recorded ten sites with historic components (including one multi-component site). These historic resources were found on five of the six different landforms sampled. This includes five sites found on terminal moraine, two on ground moraine, and one each on outwash plains, outwash channels, and lacustrine deposits. No historic sites were located on alluvium. Since three of the ten historic sites were recorded by windshield survey, any correlations between site location and landform lacks statistical validity. The most number of sites were found on the most common geomorphic landform in the area. This was to be expected. It is believed that Euro-Americans settled where there was tillable soil and water available, regardless of the geomorphic landform. Through technology and culture they could overcome most environmental variables. For example, the use of irrigation to farm in arid regions. It is likely that social, political, and economic events had more influence on historic land use patterns than the environmental setting (cf. Friedman 1985).

Of the ten historic sites, six are archaeological remains, three contain standing architectural features, and one is a cultural materials scatter. The historic archaeological remains are mainly former homestead locations from which the buildings had been torn down and removed, where only foundations and depressions now exist. The sites with standing structures are also abandoned homesteads, in a poor state of repair. The cultural materials scatter is an historic era trash dump.

By examining the chain of title for the property which contains each of the historic resources, some generalizations can be made about Euro-American settlement in the region. All of the sites date between A.D. 1880 and 1940. The earliest date of patent was 1883, for site 32NE36. Two sites were patented between 1888 and 1890, three sites between 1900 and 1903 and three sites between 1913 and 1914. Two of the historic sites were patented by people with Scandinavian surnames and one with a German name. None of the sites could be identified with Native Americans from the Devils Lake Sioux reservation.

8.2 ANALYSIS USING PREVIOUSLY RECORDED PREHISTORIC SITES

The geomorphic data from Larson's (1986) report was also utilized to analyze a number of other prehistoric sites previously recorded in the Devils Lake project area. This includes sites recorded by Schneider, et al. (1977), Mallory (1966), Cooper and Bauxar (1947a and 1947b) and others. Including the current Powers survey, a total of 65 archaeological sites are recorded within the project boundaries and can be used to expand the data set for the regional analysis of site locations and geomorphic landform associations. These sites are located along Devils Lake, Stump Lake, the Sheyenne River, and some of the areas between these water sources. The only area not covered by previous work is along the upstream lakes. Tables 10-13 are listings of the sites in Nelson, Benson, Eddy and Ramsey Counties included in this study. The locations of these sites are illustrated in Figure 36.

8.2.1 Site Location and Geomorphic Landform Relationships

Of the 65 archaeological sites listed in Tables 10-13, 64 have been located in relation to Larson's (1986) geomorphic landforms. Lacking from this analysis is any data on the number of acres inventoried by the previous archaeological surveys, which directly influences the expected number of sites in a chi-square test. Of the 64 sites, 36, or 56%, are located on terminal moraine. Thirteen, or 20%, are on outwash plains; five, or eight percent, on river alluvium; four, or six percent, on lacustrine deposition; three, or five percent, on eskers; two, or three percent, on outwash channels; and only one, or two percent, are located on ground moraine.

It appears, from the above percentages, that terminal moraine is the primary geomorphic landform with archaeological site locations. However, the specific acreages of the previous surveys are unknown. Given the fact that terminal moraine is the predominant landform present in the region, is not unexpected that it contains the majority of the prehistoric sites recorded. Without specific data of areas surveyed, this conclusion can not be statistically confirmed.

The low number of sites associated with outwash channels and ground moraine are likely due to the restricted amount of survey conducted on these landforms. Survey of outwash channels should also necessarily include adjacent highlands as well as the channel bottoms to be directly comparable to the Powers data.

The second most sensitive geomorphic unit, in terms of archaeological site locations, is the outwash plains distal to the terminal moraines. Thirteen, or 20% percent, of the sites are found on this landform. Sites are located along

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Table 10

BENSON COUNTY: ROSTER OF ARCHAEOLOGICAL SITES WITHIN THE PROJECT AREA

<u>Site Number</u>	<u>Legal Location</u>	<u>Topographic Map</u>	<u>Site Type</u>	<u>Geomorphic Unit</u>	<u>Soils Association</u>	<u>Water Source</u>	<u>Meters to Water</u>
32BE16	E1SE1SW1 and SW1SE1SW1 Section 1, T.151N., R.64W.	Tokio, 7.5', 1950	Stone Circles	Terminal Moraine	Barnes-Buse Very Strong Loams	Lake	459
32BE17	NW1NE1NW1, Section 31, T.151N., R.65W.	Sheyenne, 7.5', 1950	Rock Ring	Terminal Moraine	Heimdal-Esmond Very Strong Loam	Sheyenne River	610
32BE21	SW1SE1SE1, Section 17, T.151N., R.68W.	Flora, 7.5', 1951	Cultural Materials Scatter, With Ceramics	Alluvium	LaDelle, Silt Loams	Sheyenne River	120
32BE22	NW1SW1NW1, Section 19 T.152N., R.67W.	Josephine, 7.5', 1951	Cultural Materials Scatter	Terminal Moraine	Barnes-Svea Loams	Bead Lake	400
32BE18	SE1NW1NW1, Section 19 T.152N., R.67W.	Josephine, 7.5', 1951	Cultural Materials Scatter	Terminal Moraine	Barnes-Svea Loams	Bead Lake	366
32BE20	NW1NW1NE1, Section 4, T.152N., R.67W.	Minnewaukan East, 7.5', 1958	Stone Circles	Terminal Moraine	Barnes-Svea Loams	Bead Lake	457
32BE1	NE1NE1, Section 15, T.152N., R.65W.	Fort Totten, 7.5', 1951	Mound	Terminal Moraine	Aagstad-Bottineau	Lake	950
32BE2	SE1NW1, Section 15, T.152N., R.65W.	Fort Totten, 7.5', 1951	Mound	Terminal Moraine	Barnes-Svea Loam	Lake	1060
32BE3	NE1, Section 28, T.151N., R.65W.	Tokio SW, 7.5', 1950	Fortified Village	Alluvium	Lamoure Silt Loam	Sheyenne River	200
32BE4	SE1, Section 28, T.151N., R.65W.	Sheyenne, 7.5', 1950	Mound	Terminal Moraine		Sheyenne River	

Table 10

Page 2

<u>Site Number</u>	<u>Legal Location</u>	<u>Topographic Map</u>	<u>Site Type</u>	<u>Geomorphic Unit</u>	<u>Soils Association</u>	<u>Water Source</u>	<u>Meters to Water</u>
328E6	NW1NE1, Section 29, T. 151N., R. 65W.	Sheyenne, 7.5', 1950	Cultural Materials Scatter With Ceramics	Outwash Plain	Coe Shaly Loam	Sheyenne River	335
328E7	SE1, Section 35, T. 151N., R. 67W.	Oberon SW, 7.5', 1950	Cultural Materials Scatter			Sheyenne River	
328E8	Parts of Sections 25, 26, 35 and 36, T. 153N., R. 66W.	Graham's Island, 7.5', 1951	Traditional Hidatsa Site	Terminal Moraine, Lacustrine	Bottineau Loam, Claire, Loamy Coarse Sand	Lake	
328E201	NW1NW1, Section 11, T. 152N., R. 66W.	Graham's Island, 7.5', 1951	Mound	Lacustrine	Claire, Loamy Sand	Lake	900
328E203	NE1SE1, Section 29, SW1NW1, Section 28 T. 151N., R. 65W.	Tokio SW, 7.5', 1950	Mounds	Terminal Moraine	Heimdal, Esmond, Very Stony Loam	Sheyenne River	300
328E208	NW1SE1, Section 16, T. 152N., R. 65W.	Fort Totten, 7.5', 1951	Cultural Materials Scatter	Terminal Moraine	Aastad Loam	Lake	580
328E401	SE1SE1, Section 16, T. 152N., R. 65W.	Fort Totten, 7.5', 1951	Mound	Terminal Moraine	Bottineau Loam	Lake	790
328E402	SE1NW1NW1, Section 25, T. 151N., R. 64W.	Horseshoe Lake, 7.5', 1951	Mound	Terminal Moraine	Buse Loam	Lake	1500
328E403	NE1SE1, Section 26, T. 151N., R. 64W.	Horseshoe Lake, 7.5', 1951	Stone Circles	Terminal Moraine	Buse Loam	Lake	100
328E404	SE1SW1SW1, Section 35, T. 151N., R. 64W.	Horseshoe Lake, 7.5', 1951	Mound	Outwash Plain	Coe Shaly Loam	Lake	1000

Table 10
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Site Number	Legal Location	Topographic Map	Site Type	Geomorphic Unit	Soils Association	Water Source	Meters to Water
32BE405	SW1/4SW1/4, Section 35, T.151N., R.64W.	Horseshoe Lake, 7.5', 1951	Rock Cairns	Terminal Moraine	Barnes-Buse Loams	Lake	750
32BE406	SE1/4SE1/4, Section 35, T.152N., R.64W.	Tokio, 7.5', 1950	Petroform	Lacustrine	Claire Loamy Coarse Sand	Lake	610
32BE407	NE1/4SE1/4, Section 6, T.151N., R.62W.	Free People's Lake, 7.5', 1951	Cultural Materials Scatter	Lacustrine	Overly Silty Clay Loam	Lake	450
32BE408	SE1/4SE1/4, Section 28, T.151N., R.65W.	Tokio SW, 7.5', 1950	Mound	Terminal Moraine	Heindal, Esmond Very Stony Loam	Sheyenne River	975
32BE409	NW1/4SE1/4, Section 8, T.151N., R.62W.	Devils Lake Mtn., 7.5', 1950	Mound	Terminal Moraine	Barnes-Svea Loam	Lake	800
32BE410	SW1/4NW1/4, NW1/4NW1/4, Section 17, T.152N., R.64W.	Fort Totten, 7.5', 1950	Mounds	Terminal Moraine	Buse Loams	Lake	800
32BE411	SE1/4NE1/4, Section 1, T.151N., R.64W.	Tokio, 7.5', 1950	Mound	Terminal Moraine	Barnes-Buse Loam	Lake	450
32BE419	N1/4, Section 22, T.153N., R.66W.	Graham's Island 7.5', 1950 and Minnewaukan East, 7.5', 1951	Cultural Materials With Ceramics	Lacustrine and Terminal Moraine	Lallie Loam and Claire Coarse Loamy Sand and Bottineau Loam	Lake	150

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Table 11

EDDY COUNTY: ROSTER OF ARCHAEOLOGICAL SITES WITHIN THE PROJECT AREA

<u>Site Number</u>	<u>Legal Location</u>	<u>Topographic Map</u>	<u>Site Type</u>	<u>Geomorphic Unit</u>	<u>Soils Association</u>	<u>Water Source</u>	<u>Meters to Water</u>
32ED030	SE1/4NE1/4, Section 6, T.150N., R.63W.	Horseshoe Lake, 7.5', 1951	Cultural Scatter	Outwash Plain	Hecia Sandy Loam	Lake	914
32ED03	Portions of Sections 11, and 12, T.150N., R.65W.	Tokio SW, 7.5', 1950	Mound, Effigy Complex	Outwash Plain	Brantford Loams	Sheyenne River	1400
32ED04	Center, Section 24, T.150N., R.65W.	Tokio SW, 7.5', 1950	Mounds	Outwash Plain	Sioux Gravelly Loam	Sheyenne River	1500
32ED05	N1/4, Section 18, T.150N., R.64W.	Tokio SW, 7.5', 1950	Cultural Scatter	Alluvium	LaBelle Silty Loam	Sheyenne River	100
32ED12	SW1/4, Section 31, T.150N., R.64W.	Tokio SW, 7.5', 1950	Cultural Scatter	Outwash Plain	Binford Sandy Loam	Sheyenne River	1200
32ED13	SE1/4SE1/4, Section 25, T.150N., R.65W.	Tokio SW, 7.5', 1950	Mounds	Outwash Plain	Binford Sandy Loam	Sheyenne River	1500
32ED201	NE1/4, Section 18, T.150N., R.64W.	Tokio SW, 7.5', 1950	Mound	Outwash Plain	Binford Sandy Loam	Sheyenne River	600
32ED202	NW1/4, Section 19, T.150N., R.64W.	Tokio SW, 7.5', 1950	Cultural Scatter	Alluvium	LaBelle Silty Clay	Sheyenne River	100
32ED203	NE1/4NW1/4, Section 12, T.150N., R.65W.	Tokio SW, 7.5', 1950	Cultural Scatter	Alluvium	LaBelle Silty Clay	Sheyenne River	100
32ED403	NW1/4NE1/4SW1/4, Section 13, T.150N., R.65W.	Tokio SW, 7.5', 1950	Mounds/Stone Circles	Outwash Plain	Egeland Sandy Loam	Sheyenne River	1250
32ED404	NE1/4SW1/4SE1/4, Section 17, T.150N., R.62W.	Hamar, 7.5', 1962	Mounds	Outwash Plains/Dunes	Svea-Buse-Barnes Loam	Lake	20

Devils Lake Flood Control Project

Table 12

NELSON COUNTY: ROSTER OF ARCHAEOLOGICAL SITES WITHIN THE PROJECT AREA

<u>Site Number</u>	<u>Legal Location</u>	<u>Topographic Map</u>	<u>Site Type</u>	<u>Geomorphic Unit</u>	<u>Soils Association</u>	<u>Water Source</u>	<u>Meters to Water</u>
32NE37	E1/4NE1/4 and NE1/4NE1/4 Section 24, T.150N., R.61W.	Tolna, 7.5', 1951	Cultural Materials Scatter	Outwash Plain	Arvilla Sandy Loam	Shenenne River	455
32NE35	NW1/4SW1/4, Section 19, T.151N., R.61W.	Devils Lake Mountain, 7.5', 1950	Cultural Materials Scatter	Outwash Plain	Brantford, Kensal Loams	Lake	180
32NE38	NW1/4SW1/4, Section 27, T.152N., R.61W.	Pekin NW, 7.5', 1950	Cultural Materials Scatter	Terminal Moraine	Svea-Buse Loams	Lake	400
32NE401	SW1/4NE1/4, Section 12, T.151N., R.61W.	Pekin NW, 7.5', 1950	Mound	Terminal Moraine	Sioux-Barnes Loam	Lake	250
32NE402	W1/4SW1/4, Section 1, T.151N., R.61W.	Pekin NW, 7.5', 1950	Bison Jump	Terminal Moraine	Maniduska Sandy Very Stony Loam	Lake	75
32NE403	NW1/4SE1/4, Section 28, T.151N., R.60W.	Pekin, 7.5', 1951	Cultural Materials Scatter	Terminal Moraine	Maniduska Sandy Very Stony Loam	Lake	100
32NE404	N1/4NE1/4, Section 28, T.151N., R.60W.	Pekin, 7.5', 1951	Cultural Materials	Terminal Moraine	Svea-Buse Loams	Lake	100
32NE405	NE1/4SE1/4, Section 33, T.151N., R.60W.	Pekin, 7.5', 1951	Mound	Terminal Moraine	Svea-Cresbard Loams	Lake	800
32NE406	NW1/4NE1/4, Section 21, T.151N., R.60W.	Pekin NE, 7.5', 1950	Mound	Esker	Buse-Svea Loams	Lake	900
32NE407	NW1/4NE1/4, Section 21, T.151N., R.60W.	Pekin NE, 7.5', 1950	Mound	Esker	Svea-Buse Loams	Lake	900
32NE408	NW1/4SE1/4, Section 15, T.151N., R.60W.	Pekin NE, 7.5', 1950	Mound	Esker	Sioux-Barnes Loams	Lake	1620

Table 12

Page 2

<u>Site Number</u>	<u>Legal Location</u>	<u>Topographic Map</u>	<u>Site Type</u>	<u>Geomorphic Unit</u>	<u>Soils Association</u>	<u>Water Source</u>	<u>Meters to Water</u>
32NE409	SW1/4NW1/4, Section 5, T.150N., R.60W.	Pekin, 7.5', 1951	Mounds	Terminal Moraine	Sioux Barnes Loams	Lake	600
32NE410	SE1/4SW1/4, Section 35, and NW1/4NE1/4, Section 2, T.149N., R.60W.	Pekin, 7.5', 1951	Mounds	Outwash Plain	Binford Sandy Loam	Sheyenne River	200
32NE411	SW1/4SW1/4, Section 35, T.150N., R.60W.	Pekin, 7.5', 1951	Mound	Outwash Plain	Brantford, Kensal Loam	Sheyenne River	400
32NE412	NE1/4SW1/4, Section 30, T.150N., R.60W.	Tolna, 7.5', 1951	Mound	Terminal Moraine	Kloten-Buse Loam	Sheyenne River	600
32NE413	SE1/4NE1/4, Section 31, T.150N., R.60W.	Tolna, 7.5', 1951	Mound	Terminal Moraine	Kloten-Buse Loam	Sheyenne River	1000

Devils Lake Flood Control Project

Table 13

RAMSEY COUNTY: ROSTER OF ARCHAEOLOGICAL SITES WITHIN THE PROJECT AREA

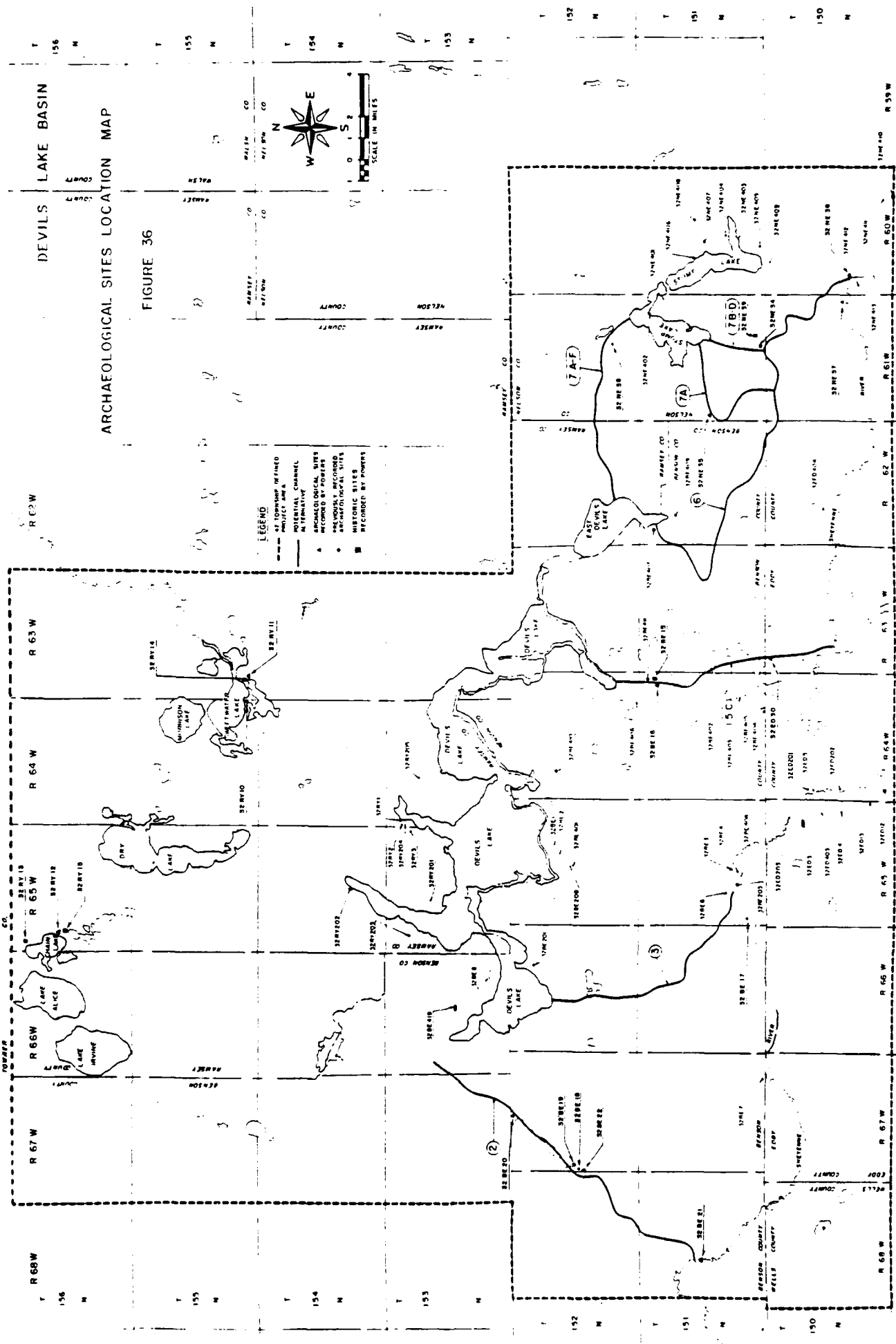
<u>Site Number</u>	<u>Legal Location</u>	<u>Topographic Map</u>	<u>Site Type</u>	<u>Geomorphic Unit</u>	<u>Soils Association</u>	<u>Water Source</u>	<u>Meters to Water</u>
32RY1	NE1SW1, Section 6, T.153N., R.64W.	Camp Grafton, 7.5', 1951	Cultural Materials With Ceramics	Terminal Moraine	Svea-Barnes Loams	Lake	90
32RY2	NW1SW1, Section 6, T.153N., R.64W.	Camp Grafton, 7.5', 1951	Mound	Terminal Moraine	Bottineau Loam	Lake	450
32RY3	NE1, Section 12, T.153N., R.64W.	Camp Grafton, 7.5', 1951	Mound	Terminal Moraine	Barnes-Svea Loams	Lake	600
32RY201	NW1NE1, Section 16, T.153N., R.65W.	Graham's Island, 7.5', 1951	Mounds	Terminal Moraine	Zell-Maddock Loam	Lake	1150
32RY202	SW1NW1NW1 and NW1SW1NW1, Section 27, E1SE1NE1, Section 28, T.154N., R.65W.	Penn, 7.5', 1950	Cultural Materials Scatter	Terminal Moraine	Svea Loam	Lake	4000
32RY203	NE1NE1, Section 7, T.153N., R.65W.	Graham's Island, 7.5', 1951	Mound	Lacustrine	Maniduska Sandy Loam	Lake	900
32RY204	SW1SW1, Section 6, T.153N., R.64W.	Camp Grafton, 7.5', 1951	Cultural Materials Scatter	Terminal Moraine	Bottineau Loam	Lake	200
32RY205	NE1NE1SW1, Section 9, T.153N., R.64W.	Camp Grafton, 7.5', 1951	Mound	Terminal Moraine	Sioux-Buse Loams	Lake	1200

Table 13

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<u>Site Number</u>	<u>Legal Location</u>	<u>Topographic Map</u>	<u>Site Type</u>	<u>Geomorphic Unit</u>	<u>Soils Association</u>	<u>Water Source</u>	<u>Meters to Water</u>
32RY11	SE1NE1, Section 31, T.155N., R.63W.	Sweetwater, 7.5, 1950	Cultural Materials Scatter, with ceramics	Terminal Moraine	Barnes-Svea loam	Sweetwater Lake	60
32RY12	NE1SE1, Section 18, T.156N., R.65W.	Cando SE, 7.5, 1957	Mound	Ground Moraine	Svea-Sioux loam	Chain Lake	60

FIGURE 36



the bluffs of the Sheyenne River and adjacent to several lakes within the outwash plain areas.

The alluvial areas surveyed are all along the Sheyenne River Valley bottoms. A total of five sites have been recorded on this landform, or eight percent of the total. These sites are cultural material scatters, most with ceramics. It is not unexpected to find sites located on the alluvial river terraces, as proven by other surveys along the Sheyenne River (ie. Haury and Schneider 1986; Vehik 1977).

Lacustrine or lake bottom sediment were believed to have a low potential for site locations. No cultural sites were found associated with this landform during the Powers survey. Four previously recorded sites appear to be located on lacustrine deposits, representing just six percent of the areal total. Given the large areas of lake shore sediments surveyed by Mallory (1966), Schneider et al. (1977) and Dahlberg et al. (1983) the site density on this geomorphic unit appears to be very low, as was expected.

One new landform appears in the geomorphic unit list for the analysis using previously recorded sites. This is the esker. Eskers are present along the northeastern edge of Stump Lake. Associated with this landform is a series of mound sites. Given the tendency for burial mounds to be located on hills around the lakes in this region, this was not unexpected. The eskers were not sampled by Powers because none of the proposed project alternatives crosses this landform. The three previously recorded sites on eskers represents five percent of the total. This demonstrates that sites could be found in areas where area where eskers are present.

8.2.2 Site Types

Site types recorded in the project area are grouped into four categories: 1) cultural material scatters; 2) mounds; 3) stone circles and 4) other types of sites. The dominant site type within the Devils Lake Basin is the mound. Of the 65 prehistoric sites recorded in the project area, 34, or 52%, are mounds. The next most common site is the cultural material scatter, with 23 sites, or 36% of the total. Stone circles represent only five percent of the total, or only three sites. Two of these sites were recorded by Powers in 1986. Other sites total five, or seven percent. These sites are represented by one petroform, one rock ring, one cairn site, and one bison jump, and one fortified village.

Table 14 is a chi-square test for the independence of site types from the landforms on which they are located. The results indicate that the working hypothesis of independence of site types and landforms must be rejected. In other words,

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Table 14

CHI-SQUARE TEST OF INDEPENDENCE
OF SITE TYPES AND GEOMORPHIC LANDFORMS

<u>Site Types</u>	<u>Terminal Moraine</u>	<u>Outwash Plain</u>	<u>Outwash Channel</u>	<u>Alluvium</u>	<u>Lacustrine</u>	<u>Other</u>	<u>Total</u>
Cultural Materials Scatters	12 (12.4)	4 (4.5)	1 (0.7)	4 (1.7)	1 (1.4)	0 (1.4)	22
Mounds	19 (19.1)	9 (6.9)	0 (1.1)	0 (2.7)	2 (2.1)	4 (2.1)	34
Stone Circles	2 (1.7)	0 (0.6)	1 (0.1)	0 (0.2)	0 (0.2)	0 (0.2)	3
Other	3 (2.8)	0 (1.0)	0 (0.1)	1 (0.4)	1 (0.3)	0 (0.3)	5
Total	36	13	2	5	4	4	64

fo (fe)

Ho = Site types are independent of the geomorphic landforms on which they are found.

Degrees of Freedom = 15
 Significance Level = .05
 χ^2 critical region \geq 24.996
 χ^2 calculated = 26.61

Conclusion: reject Ho: Site types are not independent of geomorphic landforms

there is a significant relationship between site type and geomorphic landform.

The greatest source of variation in the chi-square table is from stone circle sites. These sites would be expected to be found on glacial moraine deposits which provide raw material for their construction. However, the low total number of stone circle sites recorded may disturb the accuracy of the test, as may the fact that most of the inventoried lands are cultivated. Many of these sites may have been obliterated by modern farming practices.

The least variation occurs among the cultural material scatters, which are found on all landforms. This is not surprising. Mounds sites also are present on several landforms, but were not found on outwash channels and river alluvium. This is also not unexpected. The presence of mounds on lacustrine deposits was somewhat surprising, given the low terrain and poor quality of the soil in these areas. Most of the mounds were found on terminal moraine, followed by outwash plains. These are logical locations, because they offer hills and other natural features of higher elevations which prehistoric people seemed to prefer to build their burial mounds on. Larson (1986) thought that the outwash plains had a high potential for mound sites due to soil conditions. His theory is supported to some degree by the results of this analysis.

One reason mounds are the most common type of site recorded in the Devils Lake Basin may be due to their visibility and ease of location. They are usually located on high distinct areas and are easy to spot. Also, early archaeological investigators (ie. Montgomery 1906) seemed fascinated with mound sites, stressing them over other kinds of resources. With expanded coverage of the Devils Lake area, cultural material scatters and stone circle sites would be expected to increase in numbers, as reflected by the current Powers inventory. The percentage of mound sites in the region has probably been inflated by the biases of previous surveys.

8.2.3 Relationships to Soil Types

As previously discussed, soil associations are directly related to the geomorphic landforms on which they are formed. The soil associations for the 65 previously recorded sites are listed in Tables 10-13. There is little evidence that site locations can be predicted by soil type. Part of this has to do with the various soil classificatory schemes utilized by each county in the region. None of the published soil surveys use the same system and relationships are hard to define without knowing more about soil science. Nelson County does not yet have a published survey. Given the discrepancies in soil identification and classification, no attempt was made

by Powers to relate the 65 recorded sites to specific soil types and make generalizations about site locational patterns based on such an analysis.

8.2.4 Relationships to Water

Of the 65 archaeological sites noted in the project area, 22, or 34%, are located along the Sheyenne River Valley (Figure 36). Five of these sites, or 28%, can be identified as being on alluvial terraces of the valley bottom. These sites have a mean distance of 124 m to the river with a standard variation of 43 m. All are cultural material scatters.

The other sites along the Sheyenne River are located on the uplands above the river valley. Of these sites, distance to the modern course of the Sheyenne River was calculated for 15 sites. These 15 sites have a mean distance to the river of 822 m with a large standard deviation of 476 m. This reflects the variation in width of the valley and distance to the modern course of the river. Ten of these sites, or 66.7%, are located on outwash plains overlooking the river and five, or 33.3%, are on terminal moraine. Eleven resources near the Sheyenne River, or 73%, are mound sites; three are cultural material scatters, or 20%; and one (seven percent) is a rock ring feature.

Of the 65 recorded sites, 26, or 40%, are directly associated with the Devils Lake-Stump Lake complex. This perhaps reflects a bias of previous investigators to study this area. Sites along the shores of these lakes have a mean distance to water of 749 m. The standard deviation is very large at 774 m. It must be remembered that distance to water is measured from the USGS topographic quadrangle maps of 1950s. Lake levels have changed over time. Depending on previous lake elevations, distance to water could have been much closer at the time of the occupation of these sites.

Areas adjacent to the lake have been surveyed previously with generally negative results. This is noted by Mallory (1966), Schneider et al. (1977) and Dahlberg et al. (1983). It is thought that these low level areas may have been under water during prehistoric times. In fact, all cultural sites of prehistoric origin are located above the 1,450 ft elevation contour line (442 m). This leads to the conclusion that prehistoric occupations may be directly associated with the prominent standline of the Devils Lake-Stump Lake complex, established at 1,453 ft amsl. Distance from prehistoric sites in this area and the modern lake level is therefore reflected by high standard deviation, since the lake has dropped in elevation in historic times (see Figure 5). The association of prehistoric sites with the 1,453 feet strandline remains a viable hypothesis to be tested by future work in this area.

The sites around Devils Lake are primarily located on terminal moraine above the ancient shoreline. This is true for 20, or 77%, of these sites. Three are situated on eskers and three on lacustrine deposits. Mounds account for 62% of the recorded sites along the lake shores. Again, this is probably due to the ease of finding and distinguishing these sites.

Fourteen of the 65 previous recorded archaeological sites, or 22%, lie between the Devils Lake-Stump Lake complex and the Sheyenne River. The only inventories of this area was Schneider et al. (1977) and the current Powers survey. Therefore, the low total number of sites reflects a lack of attention given to this area. Most of the sites Powers recorded were located south of Devils Lake. Undoubtedly, additional survey would produce many more sites in this area.

The sites located between Devils Lake and the Sheyenne River have a mean distance of water of 588 m with a standard deviation of 376 m. Compared to the Powers data alone, this is about 100 m further from water on average. This may reflect the inclusion of mound sites, which appear to be further from the small glacial lakes which dot this area. The combined data indicates that sites in this region are not very close to permanent water. This may again be due to the fact that modern lake levels are lower than they were when the sites were occupied. However, these lakes south of Devils Lake were not as large, resulting in lower mean and standard deviations.

Four of the sites between the Devils Lake-Stump Lake complex and the Sheyenne River are mounds, or 29%. Cultural material scatters and stone circles, with eight or 57%, are the most common site type in this region. The others are rock feature sites. Most of the sites, eight or 57%, in this area are located on terminal moraine. Outwash plains, with three sites, account for 21%; outwash channels and lacustrine deposits have two, or 14%, each.

8.3 ADDRESSING THE RESEARCH HYPOTHESES

The Powers research design (see Appendix B and Section 5 of this report) presented five research hypotheses to be tested with the data collected in the field. The first hypothesis stated that the majority of the prehistoric archaeological sites recorded during the survey would be located on landforms noted by Larson (1986) as having a high site potential. This hypothesis has been rejected. Statistical analysis has indicated that there is little correlation between geomorphic units and site locations. The majority of sites were found on terminal moraine because it is the most common landform in the area, not because there was any proven attraction for prehistoric people to settle there.

The second hypothesis was that regardless of landforms, it was expected that most sites would be found near water. This hypothesis does not hold true. Archaeological sites located on alluvial terraces in the Sheyenne River Valley were found to be much closer to water than the sites on the uplands above the river. Also, sites recorded between Devils Lake and the Sheyenne River turned out to be closer to permanent sources of water than the sites recorded around the Devils Lake-Stump Lake complex. The sites closest to water were found along the lakes north of Devils Lake. Therefore, there appears to be some relationship between site location, landform, topography, and distance to water. The sites around the Devils Lake-Stump Lake complex apparently are situated away from the modern shoreline because they were associated with the prehistoric standline which was much higher than the current lake level, above the 1,450 ft elevation contour. The sites along the smaller lakes may be located closer to water either because these lake levels have not fallen much in elevation over time, or because the small survey area biased the sample.

The third hypothesis stated that few sites would be found in the bottoms of the outwash channels while the uplands adjacent to them would have a relatively higher site density. This hypothesis has generally proven to be valid. All of the sites recorded by Powers along the outwash channels were found on the highlands overlooking the channels, and none were found in the channel bottoms.

The fourth hypothesis stated that areas away from the outwash channels, on the open rolling plains, would have a low site density, except in areas where water was available. This hypothesis can be supported. About 20% of the total number of sites previously recorded in the region were located on outwash plains. However, the Powers survey indicated that the majority of these sites are to be found on the bluffs above the Sheyenne River Valley, or adjacent to permanent lakes.

The last hypothesis concerns only historic resources. Judging from historical studies of Euro-American settlement patterns on the Great Plains (eg. Hargreaves 1957; Gates 1966), it was expected that the majority of the historic sites recorded in the project area by Powers would be related to the ca. 1909-1930 homesteading boom period. This proved not to be the case. Fully two-thirds of the historic sites recorded by Powers pre-dated 1909. Schweigert (1977), in his historical investigation of the Devils Lake region, noted two boom periods of Euro-American settlement. One was in the early 1880s, related to the establishment of the Sioux reservation at Fort Totten and the construction of railroads through this area. The second homesteading boom mentioned by Schweigert was around 1906, sparked by the reduction of the reservation and the opening of land sales to non-natives. The Powers data confirms neither of these trends. Only one site

dated to the early 1880s, and none corresponded to the ca. 1906 boom. Instead, two peaks in the patent dates were noted, one between 1900 and 1903 and another from 1913 to 1914.

9.0 CONCLUSIONS AND RECOMMENDATIONS

The following section will summarize the findings of the Powers survey, offer some general conclusions about the nature of the cultural resources in the Devils Lake region, and assess the impact of each of the flood control alternatives on known resources in the area.

9.1 SUMMARY OF RESULTS

The 1986-1987 Powers inventory of 2,000 acres in the Devils Lake region recorded 21 new cultural sites and 11 isolated finds. The sites include 11 prehistoric components, nine historic components, and one multi-component location. None of the historic sites appear to meet the criteria for nomination to the NRHP. No additional investigations are recommended at the historic sites. Of the 12 prehistoric components, four were judged to be ineligible for nomination to the NRHP, and no further work is recommended. The other eight prehistoric resources are of undetermined NRHP eligibility. If any of these sites should be impacted by future Corps actions, it is recommended that a Phase II archaeological testing program be conducted at each site prior to construction, to assess their significance. None of the isolated finds are considered significant, and no further work is recommended at those locations.

The Powers investigation was only a sample survey of a small part of the Devils Lake Basin. It did not cover all of the project alternatives. Therefore, it is recommended that a 100% intensive pedestrian inventory be performed for whichever alternative is finally selected by the Corps. This work must be carried out prior to project construction.

9.2 GENERAL CONCLUSIONS

As stated in the Corps scope-of-work (Appendix A), the goal of this study was to generate a model for archaeological site locations based on the geomorphic landforms in the Devils Lake Basin. Unfortunately, this goal could not be attained with the present survey data. The primary reason for this may be the small size of the survey, which totalled only 2,000 acres. A much larger sample is needed to produce a statistically valid predicative model for this region. The incorporation of previous archaeological investigations in the area into the Powers analysis was attempted. However, this data lacked acreage totals for each of the landforms surveyed. Site types were biased by inclusion of large numbers of mound sites recorded by windshield survey. Lack of systematic sampling by previous investigators produced unreliable results. Nevertheless, several site locational

patterns were noted which could aid the Corps in planning their flood control alternatives for the Devils Lake region.

The working hypothesis that there is no preference for prehistoric sites to be located on specific landforms was accepted, after analysis of the survey data. Some variation in site locations was noted, but not enough to provide statistical significance. Half of the sites recorded by Powers, and 56% of the total archaeological sites in the region, are on terminal moraine. Seventeen percent of the sites from the Powers survey were on outwash plains and 20% of the total sites. Seventeen percent of the Powers sites were found on outwash channels, but none of the other recorded sites were associated directly with this landform. Eight percent of the sites recorded by Powers and eight percent of the total sites were found on river alluvium. None of the Powers survey sites and six percent of the total sites were recorded on lacustrine deposits.

The percentages of sites found on each of the landforms is closely related to the amount of survey conducted on that geomorphic unit. Most sites, about half, were found on terminal moraine. This was expected, as terminal moraine is the most common landform in the Devils Lake area. Roughly equal site percentages were found on outwash plains and river alluvium. The major discrepancy occurs on outwash channels and lacustrine deposits, which had low site densities.

Seventeen percent of the sites recorded by Powers were associated with outwash channels. The sites were located on the highlands overlooking the channels and surrounding plain. None were found in the channel bottoms. Lack of previously recorded sites along these channels is most likely a direct result of non-intensive investigation of these areas. Most of the 1975 UND survey was confined to narrow corridors for irrigation canals, which probably followed the bottoms of these channels and did not extend upward to the higher land above them. The site potential of the bottom of these channels, which are low and marshy, is very low. However, site density increases dramatically on the upper edges of these channels, as proved by the current survey.

On lacustrine deposits, no sites were recorded during the Powers survey. Only six percent of the total sites are found on this geomorphic unit. Large areas of lacustrine deposits were inventoried by UND in 1975. Few sites were recorded, except in places above the 1,450 ft elevation contour, which represented the ancient strandline for the Devils Lake-Stump Lake complex.

As a result of the current study, it is concluded that sites can be found on all landforms. Greater numbers will be found on terminal moraine, given its domination of the Devils Lake terrain. Few sites will be found in lacustrine deposits below

the 1,450 ft contour. The other landforms all exhibit cultural sites generally in the vicinity of permanent water sources.

Overall site density in the Devils Lake area, based on the Powers survey data, is one site in every 166.7 acres. For the channel plans area, one site was found for every 160 acres inventoried. On the upstream lakes, one site was recorded in every 200 acres. Site densities can also be discussed by landform. Terminal moraine have about one site in 97.5 acres; outwash plains one site in every 160 acres; outwash channels one site in 200 acres; alluvium one site in 115 acres; and lacustrine deposits produced no sites in 425 acres.

Mounds are the dominant site type in the Devils Lake Basin, representing 52% of the total archaeological sites recorded. However, no mounds were recorded by Powers along the channel plans and only one was found around the upstream lakes. It is believed that the totals for mound sites in the region are inflated by the biases of previous investigations. The mounds are easy to spot on the landscape, and many were recorded by windshield survey. As more land is systematically inventoried, other site types will be recorded in larger numbers, evening out the perspective of prehistoric habitation in the area.

Cultural material scatters are the next most common site type, constituting 36% of the total sites and 66.7% of the Powers inventory. Most of these sites did not contain temporally or culturally diagnostic artifacts. Stone circles are poorly represented, with only five percent of the total sites and 16.7% of Powers survey. The lack of stone circle sites may be related to the large amount of cultivated land in the area, since farmers probably destroyed these sites through field clearance. Other types of sites constitute seven percent of the total and include rock features such as stone rings, cairns and petroforms, and one bison jump.

The hypothesis that site types are independent of the geomorphic units on which they are found was tested and found to be false. A significant relationship does exist between certain types of sites and the landform on which they are located.

Two categories of permanent water sources exist in the Devils Lake Basin, the Sheyenne River and the numerous lakes of the region. Larson (1986) predicted that the greatest site potential would be found along the Sheyenne River Valley, particularly on the uplands with more moderate site density predicted for the alluvial terraces along the river bottoms. Thirty-four percent of the total recorded sites in the area, and 25% of the Powers sites, are located along the Sheyenne River. Sites on the alluvial terraces of the river bottoms are much closer to water than those on the uplands. Alluvium

sites have mean distance of $124 \text{ m} \pm 43 \text{ m}$ while upland sites have mean distance of $822 \text{ m} \pm 476 \text{ m}$. The large standard deviation of the upland sites reflects the width of the Sheyenne River Valley and distance to the modern channel.

Of the total archaeological sites, 40% are directly associated with the Devils Lake-Stump Lake complex. Mean distance to water of these sites is $749 \text{ m} \pm 774 \text{ m}$. This large distance to water and great variation is most likely due to the fact that prehistorically the water in the lakes was found at a much higher elevation. Most of the sites in this area are associated with the dominant strandline at 1,453 ft. Areas below this beachline on the lacustrine deposits of the lake have very low site potential.

Twenty-two percent of all the previously recorded sites in the region lie between the Devils Lake-Stump Lake complex and the Sheyenne River. These sites are associated with a number of smaller lakes, and are much closer to permanent water than the sites around Devils Lake. The combined totals for these sites have mean distance of $588 \text{ m} \pm 376 \text{ m}$, which compares well to the data from the Powers survey which gave a mean distance to water of $454 \text{ m} \pm 224 \text{ m}$ from the sites south of Devils Lake. Again these distances are related to modern, not prehistoric lake levels. Prehistoric water levels are not well understood for the smaller lakes.

The archaeology of the area around the upstream chain of lakes is poorly documented. Powers survey was the first to be conducted in this area. Only two sites were recorded, both 60 m from water. Thus it appears these sites are much closer to permanent water than those downstream. However, very little inventory, of only 400 acres, was performed around the upstream lakes, and from such a small sample little significant information can be gathered. A much more intensive survey of this area is needed.

9.3 PROJECT ALTERNATIVES

In order to reduce future damages to the city of Devils Lake, the St. Paul District of the Corps is proposing a number of flood control alternatives to alleviate potential raises in the level of Devils Lake. Two basic options have been suggested. The first is construction of an outlet channel to drain the water from Devils Lake into the Sheyenne River. A total of five channelization plans are currently being considered, of which, one or a combination of plans, will be selected for construction. The second alternative is to raise the level of a number of upstream lakes, increasing their storage capacity and reducing the amount of water to reach Devils Lake. Each of these possible alternatives are examined below.

9.3.1 Channelization Plans

Five main channel alignments between Devils Lake and the Sheyenne River are being considered. These plans are numbered 2, 3, 5C, 6, and 7 (A-F, A, and B-D).

9.3.1.1 Channel Plan 2

Channel Plan 2 begins at the west edge of the West Bay of Devils Lake and heads southwesterly to the Sheyenne River along a route approximately 14 miles in length. The channel would have cuts averaging 10 to 15 ft deep, with some up to 30 ft in depth. Two pump stations would raise the water about 100 ft. Stony Lake, Round Lake and Long Lakes would be increased in size along the plan.

A total of 340 acres were surveyed by Powers adjacent to Plan 2. This included 80 acres of terminal moraine, 80 acres of outwash channel, 140 acres of lacustrine deposits, and 40 acres of alluvium. A total of five cultural resources sites were recorded along the route. These are sites 32BE18, 32BE19, 32BE20, 32BE21 and 32BE22. All lie outside the channel plan impact area as currently proposed by the Corps. Sites 32BE18, 32BE19, and 32BE22 are considered not eligible for the NRHP and no additional work at these sites is recommended. Sites 32BE20 and 32BE21 are of undetermined NRHP eligibility, and these sites should be tested in project plans change and they will be adversely effected.

Should Plan 2 be selected, further archaeological survey would be necessary. The first portion of the route crosses about three miles of lacustrine deposits along the West Bay of Devils Lake. This area has low site potential below the 1,450 ft elevation contour line. None of the 120 acres surveyed along this portion of the corridor produced cultural sites. The route then crosses Highway 281 and enters a former outwash channel which contains three small bead lakes: Stony, Round and Long. The proposed raises in the water level of these lakes could effect sites located around them. Site potential is highest on the uplands above the edge of the channel, near the lakes, where sites 32BE18, 32BE19, 32BE20, and 32BE22 were recorded.

The bottom of the outwash channel along Plan 2 was archaeologically probed, between Round Lake and Long Lake, in Section 4, T.152N., R.67W., to determine the depth of fill and test the potential for buried cultural remains. The transect across the channel showed 30 cm of soil over outwash gravels along the edges and 1.10 to 1.30 m of fill in the channel bottom. No paleosols or buried cultural materials were noted.

Plan 2 then leaves the outwash channel and crosses a terminal moraine that is mostly in cultivated fields for approximately 2.5 miles. Sites may be found along the channel edge or in the terminal moraine fields, although no permanent source of water is nearby. At this point the route enters Peterson Coulee and follows this outwash channel to the Sheyenne River. Site 32BE21 was found on an alluvial terrace of the Sheyenne River Valley bottom, near the mouth of Peterson Coulee.

The alluvial bottoms along Peterson Coulee were cored in Section 17, T.151N., R.68W., using the Oakfield probe. At the time of the survey Peterson Coulee was actively flowing with a good volume of water. One intact section of terrace was discovered along the channel on the west bank. This remnant contains three distinct soil zone. The first is topsoil 20 cm in depth. The second soil zone is a paleosol at 1.25 to 1.40 m. The third is at 1.75 to 2.0 m below the surface. Other areas along the coulee did not show such soil stratification and old soil zones have most likely been destroyed by the meandering of the Sheyenne River. Deep testing of this terrace is recommended if Plan 2 is selected.

9.3.1.2 Channel Plan 3

Channel Plan 3 begins at the south side of the West Bay of Devils Lake and heads southeasterly approximately 12 miles to the Sheyenne River. The channel would have cuts of up to 25 ft deep, with an average of 10 ft. Two pump stations would raise the water 80 ft. Several small lakes and wetlands would be raised in level some 30 ft along the route.

A total of 270 acres were sampled along Plan 3. This includes 60 acres of terminal moraine, 120 acres of outwash channel, 40 acres of lacustrine deposition and 50 acres of alluvium. Only one cultural site was recorded by Powers in this area. This is site 32BE17, which is located well away from the plan as currently designed. The site is of undetermined NRHP status, and should be tested if project plans change and it is to be impacted. Also in the vicinity of Plan 3 is previously recorded archaeological site 32BE6, a cultural materials scatter with ceramics. This site is away from the channel and should not be affected by the project. Near the beginning of Plan 3 at the south end of Devils Lake an historic site, 32BE430, the Nash Railroad Tower, was recorded. It is not known how close it is to the channel plan.

Further archaeological survey of Plan 3 is recommended, if it is selected for construction. Virtually the entire 12 mile corridor is contained within outwash channels. Numerous small bead lakes and reservoirs are located along the bottom of the channel for the first six miles south of Devils Lake. Again,

the bottom of the outwash channel would offer poor locations for archaeological sites, while the uplands adjacent to it have a moderate site potential.

The outwash channel was probed in Section 14, T.151N., R.66W. to check the amount of fill. The center of the channel contained standing water could not be tested. The edges of the channel had 80 cm of fill and slopewash above culturally sterile Pierre shale clays. The active channel in the center has less fill. No buried sites or potential for stratified soils was noted.

The mouth of the channel in Section 29, T.151N., R.65W. was also very low and marshy. It was in wet hayfields of native grass at the time of the survey. The channel to the north contained an active stream. The area just above the Sheyenne River Valley at the end of Plan 3 may have a high site potential. The alluvial bottoms of the river valley were tested to two meters in depth using the Oakfield probe. No deeply stratified soils, or buried cultural materials, were observed. The alluvial river bottoms in this location is considered to have a low potential for containing cultural sites.

9.3.1.3 Channel Plan 5C

Channel Plan 5C begins along the south edge of Black Tiger Bay on the East Bay of Devils Lake and heads southerly approximately 10 miles to the Sheyenne River near Warwick. The channel cuts will average 10 ft in depth, and one pumping station will raise the water about 50 ft.

A total of 230 acres were surveyed along Plan 5C. This included 120 acres of terminal moraine, 40 acres of outwash plains, 45 acres of lacustrine deposition, and 25 acres of alluvium. A total of three cultural sites were recorded by Powers within the proposed impact corridor. These are sites 32BE15, 32BE16 and 32ED30. Site 32BE15, the remains of an historic homestead, is considered not eligible for the NRHP and no further work is recommended at that location. However, 32BE16, a stone circle site, and 32ED30, a cultural materials scatter, are of undetermined NRHP status. They should be archaeologically tested to assess their significance prior to construction of this plan. Also recorded close to the proposed line is 32BE411, a burial mound which lies outside the corridor but within visual distance. There are three previously recorded sites in the vicinity of Plan 5C. These are sites 32BE415, a rock inscription, 32ED411, the Enstad homestead, and 32ED412, the Bush homestead. Unfortunately, the actual location of these sites in relation to the proposed project is difficult to ascertain because of the scale of the map in the historic report by Schweigert (1977).

Selection of Plan 5C will necessitate further archaeological survey, testing, and possibly mitigation procedures at the sites listed above. Plan 5C holds the highest potential for cultural resources of any of the channelization plans under consideration. This plan does not follow existing outwash channels, as do most of the other alternatives. For most of its 10 mile length Plan 5C meanders across open terminal moraine and outwash plains which contain numerous lakes of various size. These lakes give the route a high potential archaeological sites. A survey of the entire of Plan 5C would be warranted, if it is chosen for construction.

The mouth of Plan 5C at the Sheyenne River is along an existing outwash channel which was active and flowing at the time of the survey. No cultural sites were located on this alluvial bottom. It was not probed because landowner permission could not be obtained. Further exploration of the archaeological potential of this area prior to construction of Plan 5C is also recommended.

9.3.1.4 Channel Plan 6

Channel Plan 6 begins at the south end of East Devils Lake and heads southeasterly to the Sheyenne River near Tolna. Its approximate length is 20 miles. The channel would average 10 ft in depth and would have one pumping station. A portion of its length runs along Tolna Coulee and is identical to the routes of Plans 7A and 7B-D.

A total of 280 acres were surveyed along the upper part of Plan 6. This includes 200 acres of outwash plains and 80 acres of outwash channel. No cultural resources were recorded by Powers adjacent to Plan 6 prior to its junction with Tolna Coulee and Plan 7A. One previously recorded archaeological site, 32BE407, a cultural materials scatter, is nearby, but apparently is outside the proposed area of impact. Two previously recorded historic sites, 32BE436, the Peterson building, and 32BE438, the Common homestead, are in the vicinity of Plan 6, but do not appear to be within the impact corridor.

Plan 6, for the most part, follows the route of an outwash channel which is broad, low and not well defined except near Devils Lake. This portion of the channel will be dammed, with a pool elevation of 1,464 ft. The bottom of this channel has a low potential for archaeological sites. Adjacent uplands have a higher potential.

The lower portion of Plan 6 heads southeasterly across an outwash plain with remnant sloughs and marshes. Surveys in the areas produced no cultural sites. However, the outwash plains adjacent to former water sources have a moderate potential for archaeological site locations. These areas

would need intensive survey prior to construction of this plan.

9.3.1.5 Channel Plan 7 (A-F, A, and B-D)

Plan 7 includes a combination of three channels. This alternative starts on the east side of East Devils Lake and connects with West Stump Lake through channel 7A-F. If this plan is implemented, the water in Stump Lake will be raised some 10 to 25 ft in elevation. A second segment would leave from the south end of West Stump Lake, via either channel 7A or 7B-D, and follows Tolna Coulee to the Sheyenne River. Plan 7A leaves West Stump Lake along a natural outlet channel to Tolna Coulee. Plan 7B-B crosses a high ridge on the south end of West Stump Lake before joining Tolna Coulee.

Powers surveyed a total of 480 acres around Plan 7. This included 80 acres of terminal moraine, 80 acres of outwash plain, 120 acres of outwash channel, and 200 acres of lacustrine deposits. A total of six cultural sites were recorded along the various Plan 7 routes. These include sites 32NE34, 32NE35, 32NE36, 32NE37, 32NE38, and 32NE39. Sites 32NE34, an historic trash scatter, 32NE36, an historic homestead, 32NE37, a prehistoric cultural materials scatter, 32NE38, a prehistoric cultural materials scatter, and 32NE39, an historic homestead, have been evaluated as not eligible for the NRHP and no further work is recommended for those locations. Site 32NE35, a prehistoric cultural materials scatter, is of undetermined eligibility. It should not be impacted, according to current project plans.

Channel Plan 7A, the connection between East Devils Lake to West Stump Lake, will create a series of ponds or small lakes which will cover the natural outlet channel between the two larger lakes. This natural channel, the Jerusalem Outlet, was once a large lake itself in glacial times. Thus the bottom of this channel is lacustrine deposits, with a low potential for containing archaeological sites. A total of 160 acres of lacustrine deposits along this channel was surveyed by Powers and no cultural sites were recorded. However, the higher areas above the channel have some potential for containing archaeological sites. This was where site 32NE38 was recorded. If these higher areas are borrowed from during construction they must be inventoried prior to impact.

This alternative proposes raises in the levels of West Stump Lake and East Stump Lake. Large segments of these lakes were surveyed in 1975 by UND and numerous sites were found. These sites are mostly at elevations over 1,450 ft and were probably associated with the prehistoric strandline. The current level of West Stump Lake is about 1,398 ft, and a 25 ft raise in the elevation of the water may not impact many significant sites. Looking at Figure 36 it appears that previously recorded

prehistoric sites 32NE402, a bison jump, 32NE403, a cultural materials scatter, and 32NE406, a mound, are all located relatively close to the modern shoreline. Four previously recorded historic sites are found on the shore of Stump Lake. This includes 32NE415, the Wamduska hotel site, 32NE416, the Harrisburg townsite, 32NE417, the Anderson homestead, and 32NE418, the Rugness cabin. If this plan is constructed it is recommended that an intensive archaeological survey be conducted around Stump Lake to assess the possible impacts to these sites and to locate, record, and evaluate any unrecorded cultural resources in this area.

Plan 7A leaves West Stump Lake along a natural outlet formed by an outwash channel. The first two miles of the channel crosses low lacustrine deposits which have little site potential. It then enters the outwash channel and angles southeast to Tolna Coulee. The bottom of this channel is wet and marshy, with low archaeological potential. One site, 32NE35, was located above this channel, indicating that the highlands adjacent to the channel bottom have a moderate potential for cultural sites.

Plan 7B-D leaves West Stump Lake, goes over a high terminal moraine ridge and heads directly south to Tolna Coulee. The first part crosses low lacustrine sediment below 1,450 ft, then crosses to the outwash channel. Powers surveyed 80 acres along the lacustrine deposits and found no prehistoric sites. The remains of one historic homestead, 32NE39, was found. If this plan is adopted, intensive survey of the terminal moraine between the lake and Tolna Coulee is recommended as this area has a high site potential.

The rest of Plan 7 follows the course of Tolna Coulee to the Sheyenne River. Tolna Coulee is a deep, well defined outwash channel which is dammed to form large lakes along much of its course. The bottom of the outwash channel has a low potential for archaeological sites. The channel bottom was archaeologically tested in Section 2, T.150N., R.60W., using the Oakfield probe in a north-south transect. The probes reveal 9.0 to 9.5 cm of non-stratified valley fill along the channel sides. The center was too wet to probe.

The mouth of Tolna Coulee was also inventoried and probed. It exhibits some deep alluvial deposits by the Sheyenne River. These deposits are non-stratified and no buried paleosols or cultural remains were encountered. About 90 cm of loamy alluvium was present over sandy sterile alluvial fill. A section of Tolna Coulee just north of the Sheyenne River was also tested. Several probes were placed on the banks of the coulee which were wet, hummocky and marshy. Again 90 to 95 cm of non-stratified valley fill was evident. The bottom of this coulee has a low potential for cultural sites. Only an historic site, 32NE36, was found at the mouth of Tolna Coulee. Site 32NE37 was a prehistoric site recorded

on the bluffs overlooking the Sheyenne River, outside of the impact area of Plan 7.

In summary, significant cultural resources have yet to be identified along the route of Plan 7. The greatest potential for impacting important sites is the proposed raise in the level of Stump Lake.

9.3.2 Upstream Lakes

The second main flood control alternative under consideration is to increase the storage capacity of several upstream lakes, including Sweetwater Lake, Morrison Lake, Dry Lake, Lake Alice, Lake Irving and Chain Lake. Since this alternative is the least likely to be selected, it was given a low priority for survey. Only 20% of the total sample, or 400 acres, was inventoried in the upstream lakes area.

The archaeology of this region is still poorly known. Powers investigation was the first to be undertaken along the lakes north of Devils Lake. Only two prehistoric cultural sites were located. The archaeological site density around the upstream lakes, of one in each 200 acres surveyed, is lower than that found for the channelization plans. The reasons for this could be related to the small survey sample, the selection of units adjacent to the modern lakeshores, and prehistoric variation in size of the upstream lakes. Sites appear to be located closer to water than in the downstream areas. Because much of the surrounding land will be flooded if the upstream lakes are raised 10 ft in elevation, as the Corps proposes, it is recommended that an extensive archaeological survey be undertaken prior to the construction of this alternative.

Of the six cultural sites recorded around the upstream lakes, two are prehistoric and four are historic remains. The four historic sites, 32RY10, 32RY13, 32RY14, and 32RY15 are all evaluated as not eligible for nomination to the NRHP, and no further work is recommended at those locations. One of the prehistoric sites, 32RY11, is a cultural material scatter tentatively identified as Blackduck from the Late Woodland period. This site is of undetermined eligibility and would require testing prior to impact. The exact nature of the adverse effect to this site from the raising of the level of Sweetwater Lake is not clear. Site 32RY12 is a mound located above Chain Lake. The site has been disturbed, but its NRHP eligibility remains undetermined without archaeological testing. This site should be tested if it is impacted. Again, it is unclear what kind of adverse effect the raise of the water in the lake will have on this site.

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APPENDICES:

- Appendix A - Scope-of-Work
- Appendix B - Research Design
- Appendix C - File Search
- Appendix D - Collected Lithic Artifacts
- Appendix E - Ceramic Artifact Analysis
- Appendix F - Site Forms
- Appendix G - Personnel Vitae

APPENDIX A:

Scope-of-Work

SCOPE OF WORK
Archeological Reconnaissance Survey of
the Devils Lake area, North Dakota

1.00 INTRODUCTION

1.01 The contractor will undertake a reconnaissance survey of cultural resources within the Devils Lake Basin area. The direction of work on this study will require heavy emphasis on incorporating previous research on the geology and geomorphology of the area into the survey sampling design, the field methods and techniques, and the analysis and synthesis of the archeology of the area.

1.02 This investigation partially fulfills the obligations of the Corps of Engineers (Corps) regarding cultural resources, as set forth in the National Historic Preservation Act of 1966 (Public Law [PL] 89-665), as amended; the National Environmental Policy Act of 1969 (PL 91-190); Executive Order (EO) 11593 for the "Protection and Enhancement of the Cultural Environment" (Federal Register, May 13, 1971); the Archeological and Historical Preservation Act of 1974 (PL 93-291); the Advisory Council on Historic Preservation "Regulations for the Protection of Historic and Cultural Properties" (36 CFR, Part 800); and the applicable Corps regulations (ER 1105-2-50).

1.03 The laws listed above establish the importance of Federal leadership, through the various responsible agencies, in locating and preserving cultural resources within project areas. Specific steps to comply with these laws, particularly as directed in PL 93-291 and EO 11593, are being taken by the Corps "... to assure that Federal plans and programs contribute to the preservation and enhancement of non-federally owned sites, structures, and objects of historical, architectural, or archeological significance." A part of that responsibility is to locate, inventory, and nominate to the Secretary of the Interior all such sites in the project area that appear to qualify for listing on the National Register of Historic Places.

1.04 EO 11593 and the 1980 amendments to the National Historic Preservation Act further direct Federal agencies "... to assure that any federally owned property that might qualify for nomination is not inadvertently transferred, sold, demolished or substantially altered." In addition, the Corps is directed to administer its policies, plans, and programs so that federally and non-federally owned sites, structures, and objects of historical, architectural, or archeological significance are preserved and maintained for the inspiration and benefit of the people.

1.05 This cultural resources investigation will serve several functions. The report will be a planning tool to aid the Corps in meeting its obligations to preserve and protect our cultural heritage. It will be a comprehensive, scholarly document that not only fulfills federally mandated legal requirements but also serves as a scientific reference for future professional studies. It will identify resources that may require additional

investigations and that may have potential for public-use development. Thus, the report must be analytical, not just descriptive.

2.00 PROJECT DESCRIPTION

2.01 An investigation is being undertaken of alternatives to reduce flood damages due to potential future raises in the level of Devils Lake. These alternatives being considered include outlet channels from Devils Lake to the Sheyenne River, increasing the storage capability of upstream lakes, and other options. Those alternatives that appear to have the greatest potential for selection include six alignments of outlet channels to the Sheyenne River and several upstream lakes that would have additional storage added. A map of the Devils Lake area (enclosure 1) shows the alignments of the outlet channel routes that have been considered. Those outlet channel routes that are still under consideration are Plans 2, 3, 5C, 6, 7A, 7C and various combinations of these plans. These plans are highlighted on enclosure 1.

2.02 In addition, the upstream chain of lakes (Sweetwater Lake, Morrison Lake, Dry Lake, Lake Alice, Lake Irving, and Chain Lake) are being considered for potential raises of up to ten feet. These lakes are also highlighted on enclosure 1.

2.03 The outlet channel plans from Devils Lake to the Sheyenne River are briefly described below:

a. PLAN 2: This plan starts on the west side of West Bay Devils Lake and heads southwesterly to join the Sheyenne River upstream of Sheyenne. The channel would have depths of cut up to about 30 feet deep, with most of the channel depth of about 10-15 feet deep. There would be 2 pump stations along the route to lift the water about 100 feet. Three lakes (Stoney, Round, and Longe Lakes) would have their levels raised along the route.

b. PLAN 3: Starting on the south side of West Bay Devils Lake and proceeding southeasterly, this plan joins the Sheyenne River downstream of Sheyenne. The channel would have depth of cut up to about 25 feet, with an average depth of cut near 10 feet. There would be 2 pump stations along the route to lift the water about 80 feet. Several small lakes/wetlands would have their water levels raised by 30 feet.

c. PLAN 5C: This plan starts on the south end of Black Tiger Bay off of East Bay Devils Lake and proceeds southerly to join the Sheyenne River near Warwick. The channel cut depths average about 10 feet. There would be one pumping station to lift the water about 50 feet.

d. PLAN 6: Beginning at the south end of East Devils Lake, this plan proceeds southeasterly to join the Sheyenne River near Tolna. There would be one pumping station, and the average depth of cut would be about 10 feet.

e. PLANS 7A and 7C: These plans start on the east side of East Devils Lake and form a connection channel to West Stump Lake. A second segment would leave from the south end of West Stump Lake and follow the Tolna Coulee to join the Sheyenne River near Tolna. Both plans 7A and 7C have the same

connection channel from East Devils Lake; however, plan 7A leaves West Stump Lake along the natural outlet channel route. Plan 7C crosses a high ridge on the south side of West Stump Lake before joining the Tolna Coulee. Both West Stump Lake and East Stump Lake are likely to have raises in their water levels (West Stump Lake up to about 10 feet higher; East Stump Lake up to about 25 feet higher). It is uncertain at this time if these plans would be entirely gravity flow channels, pump stations, or a combination of these.

2.04 Plan view and profile maps of each of the outlet channel routes are available. A sample of the typical plan view map for Plan 3 is provided as enclosure 2 and the typical profile is provided as enclosure 3. Also enclosed are reduced copies of the geomorphology maps associated with Plan 3. Larger scale maps for all of the alternatives will be available to the Contractor.

3.00 GEOMORPHOLOGY STUDY BACKGROUND

3.01 A study of the geology and geomorphology of the Devils Lake Basin area has been conducted by Mr. Robert Larson of the Waterways Experiment Station (WES) in Vicksburg, Mississippi. WES is a research and development laboratory of the US Army Corps of Engineers. Currently the study consists of a draft report entitled Geomorphological Study of the Devils Lake Area, North Dakota, and a series of 27 topographic maps (1:24,000), which have geomorphic and glacial geology features plotted on them.

3.02 The objectives of the geomorphic investigation were to: (a) interpret the Pleistocene and Holocene geomorphic development of the Devils Lake area, (b) determine the relationship between the geomorphic development of the area and the location of archeological resources, and (c) determine the potential for locating cultural resource sites in the Devils Lake area.

3.03 The geomorphic investigation was primarily restricted to the area to be traversed by probable Corps channelization projects, which are south of Devils Lake, and south and southeast of Stump Lake.

3.04 The USGS topographic maps were interpreted with respect to Pleistocene and Holocene development of landforms to delineate areas with possible cultural resource potential (cross-hatched on maps). Interpretation of the maps was supplemented with aerial photography analysis and limited field examination of selected areas.

4.00 CULTURAL RESOURCES STUDY

4.01 The study shall consist of the following tasks:

4.02 Development of a Sampling Design. At least 90% of the survey shall consist of a statistically based, systematic sample, and up to 10% may consist of intuitive survey. The sampling design shall focus on the plans outlined in Section 2.00, above, including the upstream chain of lakes. Primary focus will be on the channelization plans, with secondary focus on the upstream lakes. Decisions on where to intuitively survey shall be left up to the discretion of the Principle Investigator or the Field Director.

TOPO:

Photocopy, in 8½"x11" format, the portion of the 7.5' U.S.G.S. topographic quadrangle that shows the location of the site and surrounding area. Mark the boundaries of the site on the photocopy.

SEE ATTACHED

Map and Photo

Attach the photocopy as a separate page of the Site Form following the Map & Photo Section.

B.W. ☐ Color ☐

Photo I.D. Code _____

Storage Location _____

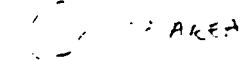
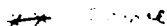
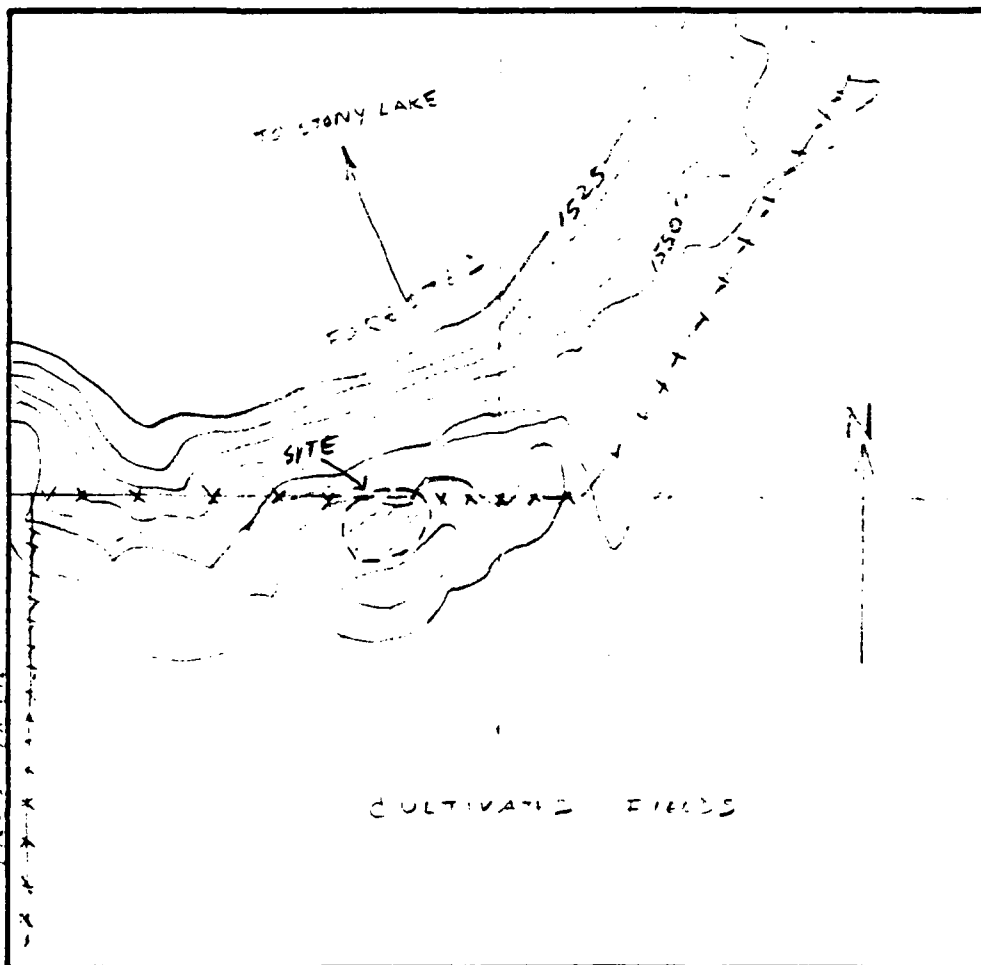
SKETCH MAP

Sketch Map:

Include north arrow, individual numbered features, artifact loci, and road or street names.

Architectural sites: include roof ridge(s) and dimensions of site.

Map Key:

 AREA FENCE FENCEMap Scale: Scale 1:1000Recorded by M. GoodmanDate 12-1-86

TOPO:

Photocopy, in 8½"x11" format,
the portion of the 7.5' U.S.G.S.
topographic quadrangle that
shows the location of the site
and surrounding area. Mark the
boundaries of the site on the
photocopy.

SEE ATTACHED
Map and Photos

Attach the photocopy as a
separate page of the Site
Form following the Map &
Photo Section.

B.W. ☐ Color ☐

Photo I.D. Code _____

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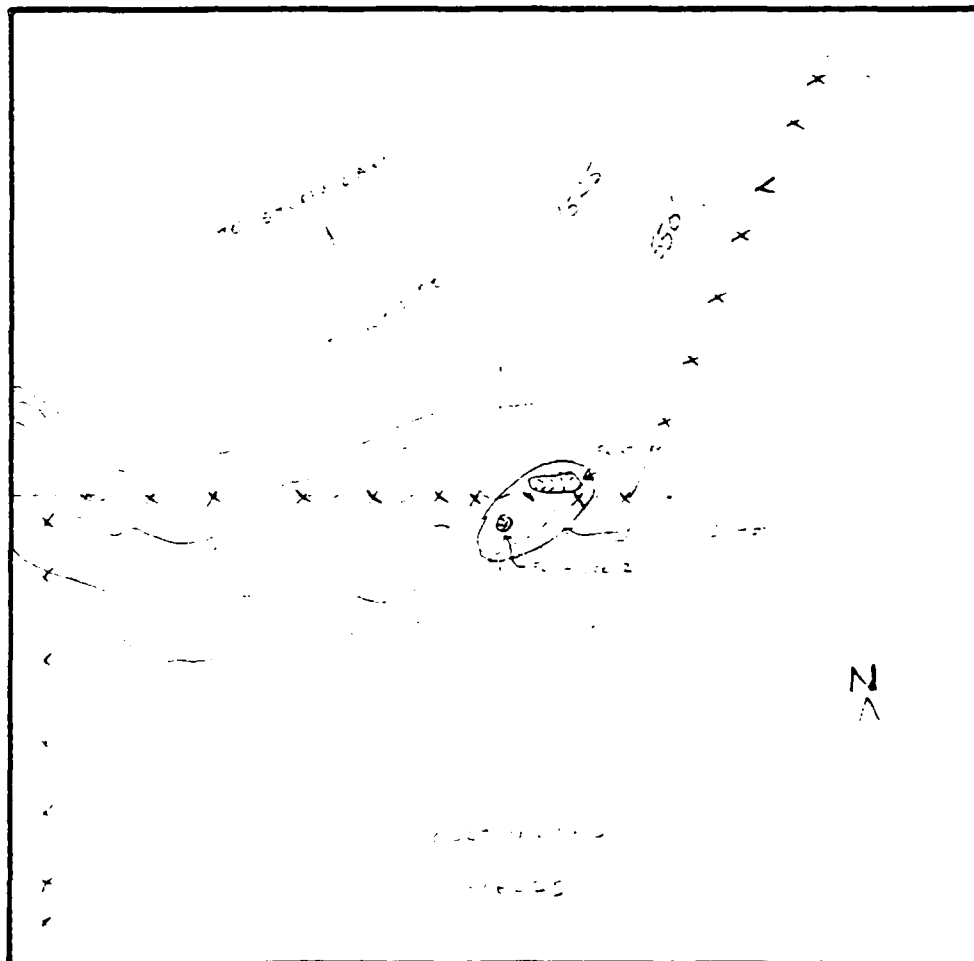
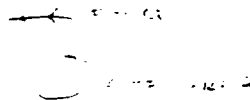
SKETCH MAP

Sketch Map:

Include north arrow,
individual numbered
features, artifact
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Architectural sites:
include roof ridge(s)
and dimensions of
site.

Map Key:



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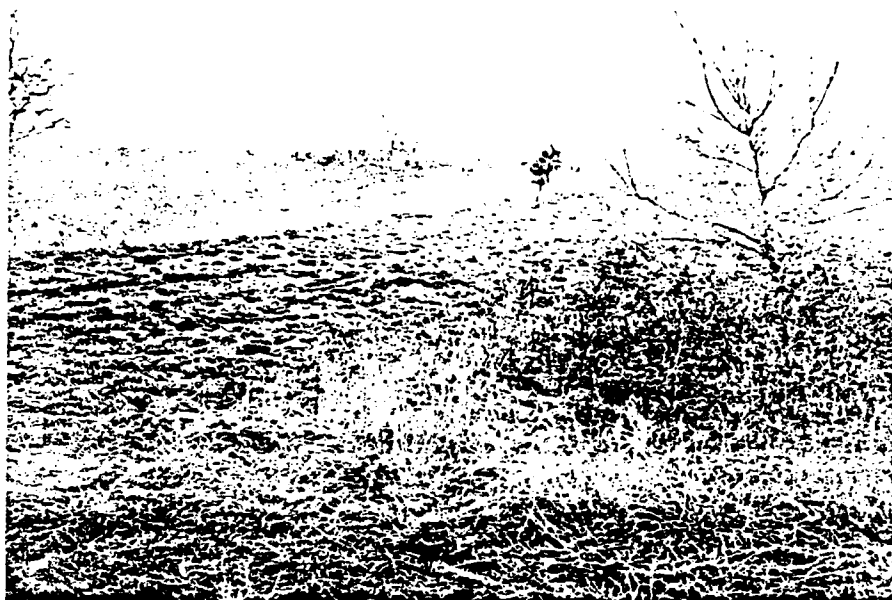
Devils Lake Flood Control Project
SE1/4NW1/4, Section 19,
T.152N., R.67W.
Benson County, North Dakota
32BE18
page 6



Site 32BE18 . overview toward the
northeast.

Devils Lake Flood Control Project
S.1/4NW1/4, SW1/4NW1/4, Section 19,
T.152N., R.67W.
Jensen County, North Dakota

32BE19
page 6



Overview toward the northeast, Site 32BE19



Overview toward the west, feature 1,
Site 32BE19

NDCRS SITE FORM
HISTORICAL ARCHEOLOGICAL SITES

Page 1

1. N
2. E
3. S
4. W
5. NE
6. SE
7. SW
8. NW
9. C

I. SITE I.D.

SITS # 32 B.E. 119
State County Site Number
Depressions and Dump

Field Code P.E.8.6.D.L.1.3 Site Name Simoy
Field Code _____ Site Name _____

Map Quad J.O.S.E.P.H.I.N.E.
Map Quad _____

LTL	Twp	<u>1.5.2</u>	R	<u>0.6.7</u>	Sec	<u>1.9</u>	QQQ	<u>16</u>	QQ	<u>18</u>	Q	<u>18</u>
LTL	Twp	<u>1.5.2</u>	R	<u>0.6.7</u>	Sec	<u>1.9</u>	QQQ	<u>7</u>	QQ	<u>5</u>	Q	<u>8</u>
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____

II. SITE DESCRIPTION

FEATURE TYPE	CULTURAL MATERIAL	<u>9.9</u> Site Type
<input checked="" type="checkbox"/> Cm Scatter	<input type="checkbox"/> Bone	
<input type="checkbox"/> Chimney	<input type="checkbox"/> Ceramics	<u>1.3</u> Context
<input type="checkbox"/> Depression	<input type="checkbox"/> Charcoal	
<input type="checkbox"/> Dump	<input type="checkbox"/> Cloth	<u>1.8.3.0</u> Site Area
<input type="checkbox"/> Earthworks	<input type="checkbox"/> Faunal Remains	m. x m.
<input type="checkbox"/> Fortification	<input type="checkbox"/> Fire Cracked Rock	_____ Cultural Depth cm.
<input type="checkbox"/> Foundation	<input type="checkbox"/> Floral Remains	
<input type="checkbox"/> Grave	<input type="checkbox"/> Glass	<input type="checkbox"/> Depth Indicator
<input type="checkbox"/> Hearth	<input type="checkbox"/> Hide, Hair, Fur	
<input type="checkbox"/> Machinery	<input type="checkbox"/> Human Remains	Occupation Date
<input type="checkbox"/> Quarry/Mine	<input type="checkbox"/> Masonry	Begin _____ End _____
<input type="checkbox"/> Rock Art	<input checked="" type="checkbox"/> Metal	Basis For Dating
<input type="checkbox"/> Trail	<input checked="" type="checkbox"/> Plastic	_____
<input type="checkbox"/> Wreck	<input type="checkbox"/> Rubber	<u>1</u> Cm Density
<input type="checkbox"/> Other	<input type="checkbox"/> Shell	
	<input type="checkbox"/> Wood	
	<input type="checkbox"/> Other	<u>0</u> Isolated Find

III. ENVIRONMENT

<u>6</u> Landform 1	<u>0.9</u> Landform 2	<u>0.5</u> Slope/Exposure	<u>7</u> Ecosystem
<input type="checkbox"/> Landform 1	<input type="checkbox"/> Landform 2	<input type="checkbox"/> Slope/Exposure	<input type="checkbox"/> Ecosystem
Elevation	Drainage System	View, Degree	View, Distance
<u>47.5</u> m.	<u>D.E.V.I.L.S. L.A.K.E.</u>	<u>2</u>	<u>3</u>
Dist Perm Water	Perm Water Type	Dist Seas Water	Seas Water Type
<u>3.6.6</u> m.	<u>1</u>	<u>3.6.6</u> m.	<u>5</u>

IV. C.R.M.

<u>3</u> Ownership	<input type="checkbox"/> Ownership
<u>1.0.2.3.8.6</u> Fieldwork Date	_____ Fieldwork Date
<u>3</u> Site Condition	<input type="checkbox"/> Collection
<u>0</u> Test/Probe	<u>0</u> Excavation
Additional Information	<u>1</u> Management Recommendation

SHSND USE

<input type="checkbox"/> Soil Association	<input type="checkbox"/> Ecozone	<input type="checkbox"/> Area Signf	_____ MS Number
<input type="checkbox"/> Soil Association	<input type="checkbox"/> Ecozone	<input type="checkbox"/> Area Signf	_____ MS Number
<input type="checkbox"/> CR Type	<input type="checkbox"/> Verified Site	<input type="checkbox"/> Non-Site	<input type="checkbox"/> E C F <input type="checkbox"/> T F
<input type="checkbox"/> State Registry	<input type="checkbox"/> National Register		

Coder

Date Coded

NDCRS SITE FORM
 ARCHEOLOGICAL SITES

Page 1

SITS # 3.2 B.E. 20
 State County Site Number

Field Code P.E.8.6.D.L.14 Site Name _____
 Field Code _____ Site Name _____

Map Quad M.I.N.N.E.W.A.U.K.A.N. E.A.S.T
 Map Quad _____

LTL <input type="checkbox"/>	Twp <u>1.5.2</u>	R <u>0.6.7</u>	Sec <u>0.4</u>	QQQ <u>5</u>	QQ <u>8</u>	Q <u>5</u>
LTL <input type="checkbox"/>	Twp _____	R _____	Sec _____	QQQ _____	QQ _____	Q _____
LTL <input type="checkbox"/>	Twp _____	R _____	Sec _____	QQQ _____	QQ _____	Q _____
LTL <input type="checkbox"/>	Twp _____	R _____	Sec _____	QQQ _____	QQ _____	Q _____
LTL <input type="checkbox"/>	Twp _____	R _____	Sec _____	QQQ _____	QQ _____	Q _____
LTL <input type="checkbox"/>	Twp _____	R _____	Sec _____	QQQ _____	QQ _____	Q _____

1. N $\frac{1}{2}$
2. E $\frac{1}{2}$
3. S $\frac{1}{2}$
4. W $\frac{1}{2}$
5. NE $\frac{1}{4}$
6. SE $\frac{1}{4}$
7. SW $\frac{1}{4}$
8. NW $\frac{1}{4}$
9. C

FEATURE TYPE

- ☐ Conical Timber Lodge
- ☐ CM Scatter
- ☐ Earthlodge Village
- ☐ Earthworks
- ☐ Fortification
- ☐ Grave
- ☐ Hearth
- ☐ Jump
- ☐ Mound
- ☐ Other Rock Features
- ☐ Pit
- ☐ Quarry/Mine
- ☐ Rock Art
- ☐ Rock Shelter
- ☐ Stone Circle
- ☐ Trail
- ☐ Miscellaneous
- ☐ Isolated Find

CULTURAL MATERIAL

- ☐ Bone
- ☐ Ceramics
- ☐ Charcoal
- ☐ Copper
- ☐ Faunal Remains
- ☐ Fire Cracked Rock
- ☐ Floral Remains
- ☐ Fossil
- ☐ Hide, Hair, Fur
- ☐ Human Remains
- ☐ Projectile Point
- ☐ Shell
- ☐ Stone, Chipped
- ☐ Stone, Ground
- ☐ Trade Good
- ☐ Wood
- ☐ Other

3.6.5.7 Site Area
2.0 Cultural Depth cm
4 Depth Indicator

CULTURAL/TEMPORAL
 AFFILIATION

- =====
- ☐ Paleo
 - ☐ Archaic
 - ☐ Late Prehistoric
 - ☐ Historic
 - ☐ Period Unknown

0 CM Density 1 Basis for Dating

1 Landform 1 0.9 Landform 2 1.0 Slope/Exposure 7 Ecosystem

☐ Landform 1 _____ Landform 2 _____ Slope/Exposure _____ Ecosystem

Elevation _____ Drainage System _____ View, Degree View, Distance

4.6.1 m. _____ D.E.V.I.L.S. L.A.K.E 4 2

Dist Perm Water 4.5.7 m. Perm Water Type 1 Dist Seas Water 2.7.4 m. Seas Water Type 4

3 Ownership _____ Ownership

1.0.2.3.8.6 Fieldwork Date _____ Fieldwork Date

6 Site Condition 0 Collection 0 Test/Probe 0 Excavation

Additional Information _____ 4 Management Recommendation

_____ Soil Association _____ Ecozone _____ Area Signf _____ MS Number

_____ Soil Association _____ Ecozone _____ Area Signf _____ MS Number

☐ CR Type ☐ Verified Site ☐ Non-Site ☐ E C F ☐ T F

☐ State Registry ☐ National Register

Coder _____ Date Coded _____

I. SITE I.D.

II. SITE DESCRIPTION

III. ENVIRONMENT

IV. C.R.M.

SHSND USE

NDUHS ARCHEOLOGICAL AND HISTORICAL SITE FORMS

Field Code PE-86-DL-13

Descriptive Section

SITS Number 32BE19

Page 3

6. Current Use of Site Pasture and cultivated wheatfields.
7. Owner's Name/Address Donald M. Almlie
8. Vegetation Mixed grasses, forbs, Northern Floodplain forest, understory, etc.
9. Cover (% of visible ground) 90%.
10. Man-hours spent on site 1 hour.
11. Project Title Devils Lake Flood Control Project.
P.I. Mervin G. Floodman
12. Report Title _____
Author _____
13. Other Published References None.
14. Description of Collections Observed None.
15. Owner-Address of Collections Observed N/A
16. Statement of Integrity The site is in poor condition. All evidence of structures are gone if they existed. The site is obscured by dense brush and modern trash accumulation and cultivation. Little of its original integrity is left.
17. Statement of Significance The site is not unique in its form or content to the area. It lacks much of its original integrity and is observed by modern forest growth, trash dumping and cultivation. The site possesses little potential to add to the regional history. It is believed ineligible to the NRHP.
18. Comments/References _____

Recorded by Mervin G. FloodmanDate 10-23-86

6. Current Use of Site Pasturage and gravel quarrying.
7. Owner's Name/Address Sarl D. and Claris Huffman, Minnewaukan, North Dakota.
8. Vegetation Mixed prairie short grasses, prickly pear cactus, sage, forbs, etc.
9. Cover (% of visible ground) 5 to 10%.
10. Man-hours spent on site 1 hour.
11. Project Title Devils Lake Flood Control Project.
P.I. Mervin G. Floodman
12. Report Title _____
Author
13. Other Published References None.
14. Description of Collections Observed None.
15. Owner-Address of Collections Observed N/A.
16. Statement of Integrity The upper hill area is impacted by gravel quarry activity.
However, the stone circle features themselves are well sodded and undisturbed.
A good potential for buried cultural materials exist.
17. Statement of Significance The significance and eligibility of the site to the
NRHP is undetermined pending a subsurface evaluation to assess the nature and
extent of the sites cultural deposits.
18. Comments/References _____

Continuation Form

Site Number 32BE19

Item No.

Access: Follow the bend in the road due south for 1.0 miles. Turn west and continue 2.0 miles. Turn north on unimproved dirt trail on section line. Follow this trail to the end of the field and fence line. Follow the north end of the field east to the site.

Deed and Title Search Documentation:

Site 32BE, SE $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$, Section 19, T.152N., R.67W.

Vol.	Page	Document #	Date	Conveyance	Location
1	206	54592	1-5-1914	State of North Dakota to John F. and Ida M. Simov, indenture.	
2	176	65775	1-10-1917	Minnewaukan State Bank to B. Christainson.	
2	212	66117	1-26-1917	B. Christianson to Minnewaukan State Bank, warranty deed.	
9	291	72670	1-14-1919	Minnewaukan State Bank to North Dakota Realty and Investment Company.	
10	378	83130	12-30-1922	North Dakota R & I Company to Oluf Christianson.	
13	394	84497	10-3-1923	Oluf and Mary Ann Christianson to North Dakota Realty and Investment Company.	
18	518	94155	12-30-192	Sheriff's Deed, M.A. Erickson to State of North Dakota.	
45	107	126764	6-25-1951	County Court to Julianna and Judith Ann Wallace.	
48	449	131916	8-16-1954	Julianna and Judith Wallace to Donald M. Almlie.	
52	104	136721	5-19-1958	Sheriff's deed to Sumner Whittier Adm of Verteran Affairs.	
52	403	137512	1-15-1959	Sumner Whittier to Donald M. Almlie, warranty deed.	

Recorded by Mervin G. Floodman

Date 10-23-1986

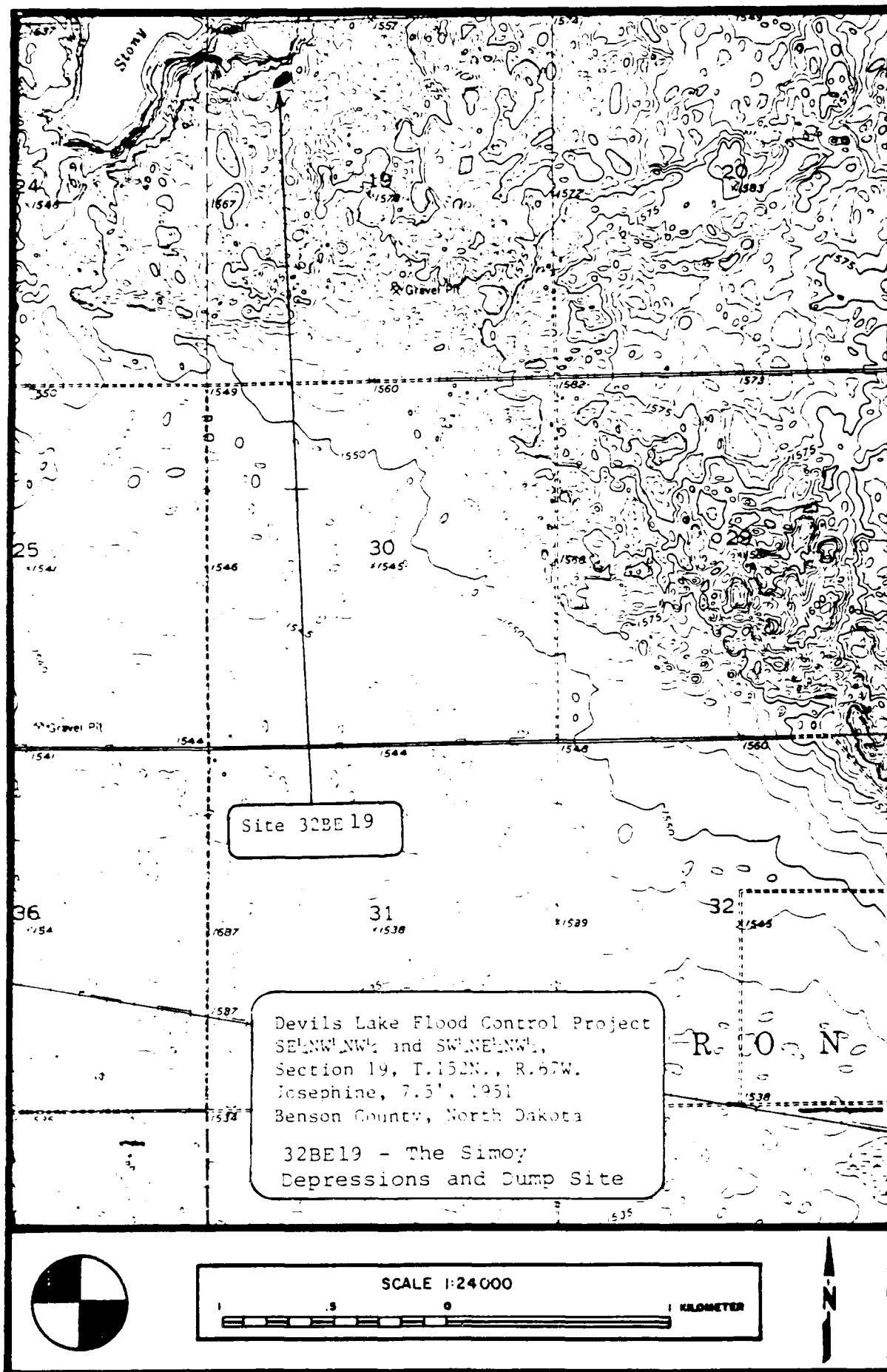
Continuation Form

Site Number 32BE20

Item No.

1. Access: ...the southeast on a diagonal to the main road. The site lies southwest
at the top of the large, high hill overlooking the roadway.

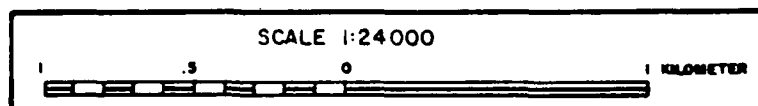
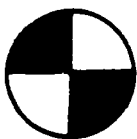
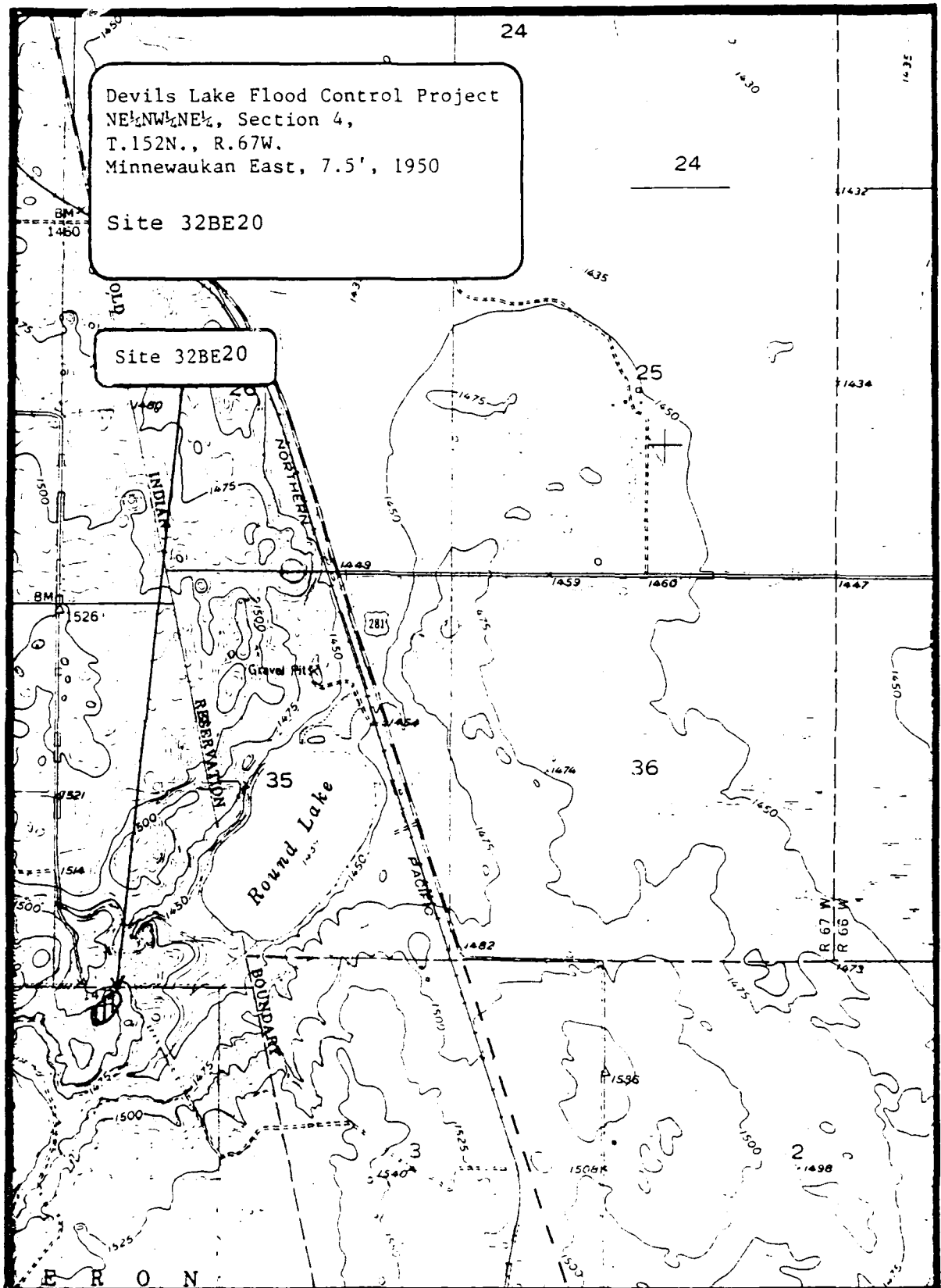
Recorded by _____ Date _____



Devils Lake Flood Control Project
NE $\frac{1}{4}$ NW $\frac{1}{4}$, Section 4,
T.152N., R.67W.
Minnewaukan East, 7.5', 1950

Site 32BE20

Site 32BE20



1. Access From Devils Lake, head west on highway 19. Continue to the junction of Highway 19 and 281. Turn south on Highway 281. Continue through Minnewaukan on 281. Continue about 3.0 to 3.5 miles south of Minnewaukan and turn west on county road across railroad tracks. Continue westerly on this road about 1.0 miles to the junction of the first county road to (see continuation sheet)

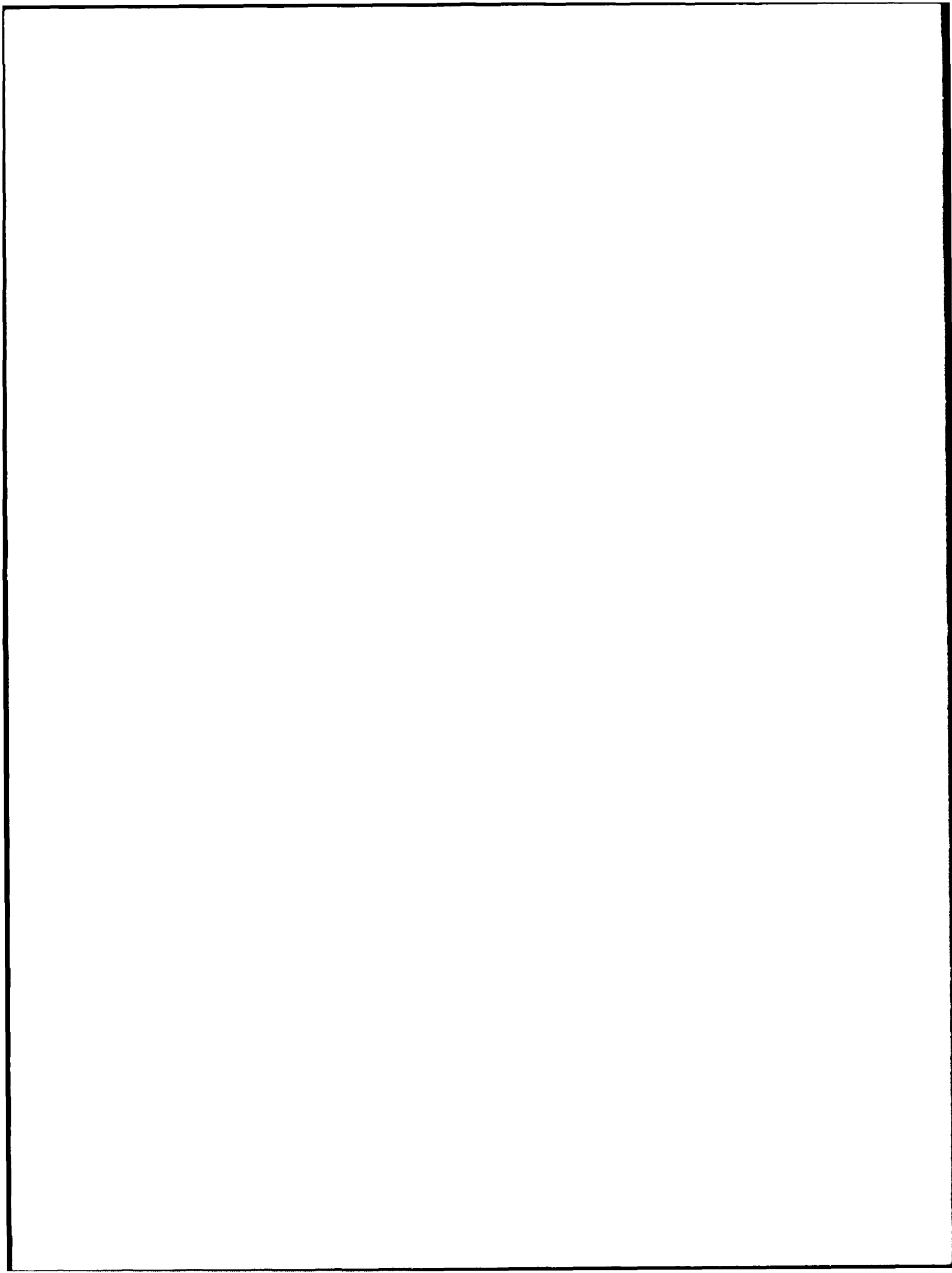
2. Description of Site The site is situated on a high hilltop overlooking an old channel and Round Lake to the northeast. The site consists of three defined stone circle features on the northern most portion of the hill. Two features are on the lower extension of the hill and one is on top next to the highest point. Each feature is well defined and fairly large. Feature 1 is on the upper hill crest and is six meters in diameter. A large cairn or rock pile is on the northeast side of the circle. Feature 2 is well defined and eight meters in diameter. Feature 3 is also well defined and eight meters in diameter. All are single courses of stone. No cultural materials were noted. The hill area is utilized for gravel quarrying on the south and various areas over the crest. No cultural materials were in the cuts. An extensive, dense scatter of rock covers the hill and may obscure other features.

3. Description of Cultural Materials (Quantify and identify) No cultural materials were observed.

0 # of items of cultural material observed 0 # Collected

4. Artifact Repository N/A.

5. Description of Subsurface Testing No subsurface testing was conducted at the site area.



TOPO:

Photocopy, in 8½"x11" format, the portion of the 7.5' U.S.G.S. topographic quadrangle that shows the location of the site and surrounding area. Mark the boundaries of the site on the photocopy.

SEE ATTACHED

Map and Photo

Attach the photocopy as a separate page of the Site Form following the Map & Photo Section.

B.W. ☐ Color ☐

Photo I.D. Code _____

Storage Location _____

SKETCH MAP

Sketch Map:

Include north arrow, individual numbered features, artifact loci, and road or street names.

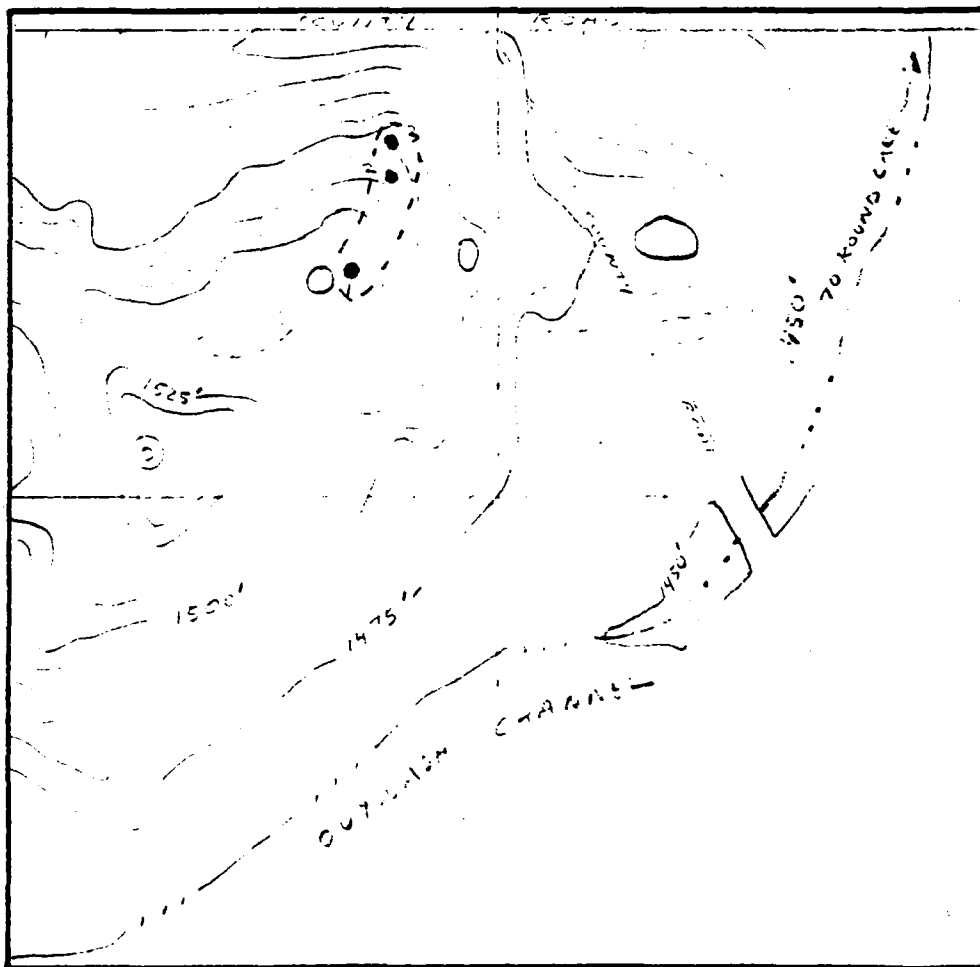
Architectural sites: include roof ridge(s) and dimensions of site.

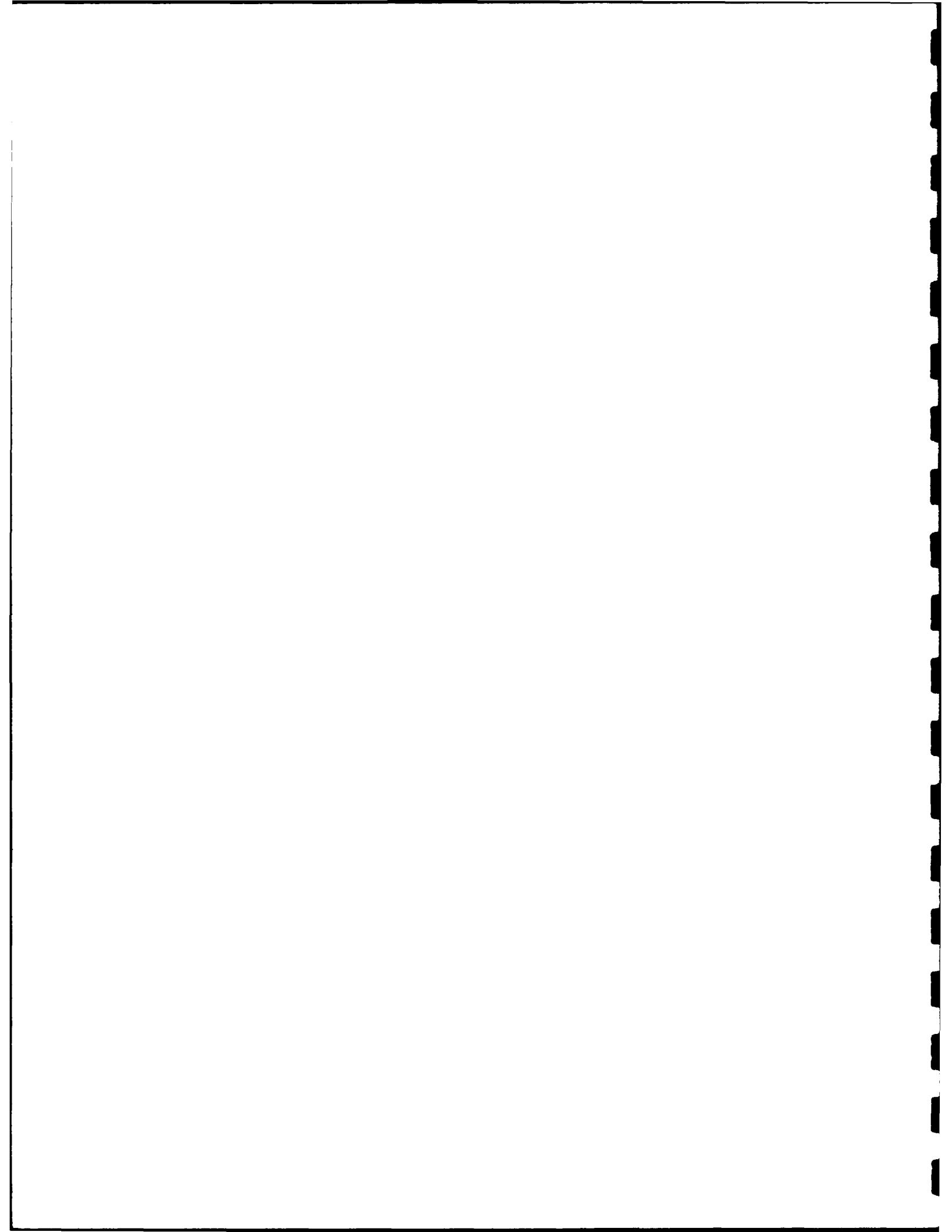
Map Key:

● Stone markers

○ Site Area

Map Scale:

Recorded by W. A. [illegible]Date 10/23/86



Devils Lake Flood Control Project
T. 152N., R. 67W., Section 4,
Benson County, North Dakota

32BE20

page 6



Overview Feature 2 and Feature 3, northeast
toward Round Lake.

NDCRS SITE FORM
 ARCHEOLOGICAL SITES

Page 1

SITS # 32 B.E. 21
 State County Site Number

Field Code P.E.8.6.D.L.1.0 Site Name _____
 Field Code _____ Site Name _____

Map Quad _____ F.L.O.R.A.
 Map Quad _____

LTL <input type="checkbox"/>	Twp <u>15.1</u>	R <u>0.6.8</u>	Sec <u>1.7</u>	QQQ <u>7</u>	QQ <u>6</u>	Q <u>6</u>
LTL <input type="checkbox"/>	Twp _____	R _____	Sec _____	QQQ _____	QQ _____	Q _____
LTL <input type="checkbox"/>	Twp _____	R _____	Sec _____	QQQ _____	QQ _____	Q _____
LTL <input type="checkbox"/>	Twp _____	R _____	Sec _____	QQQ _____	QQ _____	Q _____
LTL <input type="checkbox"/>	Twp _____	R _____	Sec _____	QQQ _____	QQ _____	Q _____
LTL <input type="checkbox"/>	Twp _____	R _____	Sec _____	QQQ _____	QQ _____	Q _____

FEATURE TYPE	CULTURAL MATERIAL	m. x m. Site Area
<input type="checkbox"/> Conical Timber Lodge	<input type="checkbox"/> Bone	<u>10.4</u> Cultural Depth cm
<input type="checkbox"/> CM Scatter	<input type="checkbox"/> Ceramics	<input type="checkbox"/> Depth Indicator
<input type="checkbox"/> Earthlodge Village	<input type="checkbox"/> Charcoal	
<input type="checkbox"/> Earthworks	<input type="checkbox"/> Copper	CULTURAL/TEMPORAL
<input type="checkbox"/> Fortification	<input type="checkbox"/> Faunal Remains	AFFILIATION
<input type="checkbox"/> Grave	<input type="checkbox"/> Fire Cracked Rock	=====
<input type="checkbox"/> Hearth	<input type="checkbox"/> Floral Remains	<input type="checkbox"/> Paleo
<input type="checkbox"/> Jump	<input type="checkbox"/> Fossil	<input type="checkbox"/> Archaic
<input type="checkbox"/> Mound	<input type="checkbox"/> Hide, Hair, Fur	<input type="checkbox"/> Late Prehistoric
<input type="checkbox"/> Other Rock Features	<input type="checkbox"/> Human Remains	<input type="checkbox"/> Historic
<input type="checkbox"/> Pit	<input type="checkbox"/> Projectile Point	<input type="checkbox"/> Period Unknown
<input type="checkbox"/> Quarry/Mine	<input type="checkbox"/> Shell	
<input type="checkbox"/> Rock Art	<input type="checkbox"/> Stone, Chipped	
<input type="checkbox"/> Rock Shelter	<input type="checkbox"/> Stone, Ground	
<input type="checkbox"/> Stone Circle	<input type="checkbox"/> Trade Good	
<input type="checkbox"/> Trail	<input type="checkbox"/> Wood	
<input type="checkbox"/> Miscellaneous	<input type="checkbox"/> Other	
<input type="checkbox"/> Isolated Find	<input type="checkbox"/> CM Density	<input type="checkbox"/> Basis for Dating

<input type="checkbox"/> Landform 1 <u>15</u>	Landform 2 <u>1.0</u>	Slope/Exposure	<input type="checkbox"/> Ecosystem
<input type="checkbox"/> Landform 1 _____	Landform 2 _____	Slope/Exposure	<input type="checkbox"/> Ecosystem
Elevation	Drainage System	View, Degree	View, Distance
<u>43.7</u> m.	<u>S.H.E.Y.E.N.N.E.</u> <u>R.I.V.E.R.</u>	<u>2</u>	<u>4</u>
Dist Perm Water	Perm Water Type	Dist Seas Water	Seas Water Type
<u>12.0</u> m.	<u>3</u>	<u>3.50</u> m.	<u>4</u>

<input type="checkbox"/> Ownership	<input type="checkbox"/> Ownership
<u>1.0.2.2.8.6</u> Fieldwork Date	_____ Fieldwork Date
<u>6</u> Site Condition	<u>3</u> Collection
<u>2</u> Test/Probe	<u>0</u> Excavation
Additional Information	<u>4</u> Management Recommendation

<input type="checkbox"/> Soil Association	<input type="checkbox"/> Ecozone	<input type="checkbox"/> Area Signf	<input type="checkbox"/> MS Number
<input type="checkbox"/> Soil Association	<input type="checkbox"/> Ecozone	<input type="checkbox"/> Area Signf	<input type="checkbox"/> MS Number
<input type="checkbox"/> CR Type	<input type="checkbox"/> Verified Site	<input type="checkbox"/> Non-Site	<input type="checkbox"/> E C F <input type="checkbox"/> T F
<input type="checkbox"/> State Registry	<input type="checkbox"/> National Register		

Coder _____ Date Coded _____

1. N
 2. E
 3. S
 4. W
 5. NE
 6. SE
 7. SW
 8. NW
 9. C

I. SITE I.D.

II. SITE DESCRIPTION

III. ENVIRONMENT

IV. C.R.M.

SHSND USE

- Recorded by Mervin G. Floodman

Date October 22, 1986

6. Current Use of Site Cultivated wheatfield.
7. Owner's Name/Address Orville and Wanda Paulson, Florida, ND.
8. Vegetation Small, immature wheat plants about 10 to 15 cm in height at the time of the survey. Large areas of open, visible ground.
9. Cover (% of visible ground) 70 to 80% visibility.
10. Man-hours spent on site One hour.
11. Project Title Devils Lake Area Flood Control Project.
P.I. Mervin G. Floodman
12. Report Title _____
Author Mervin G. Floodman
13. Other Published References None.
14. Description of Collections Observed None.
15. Owner-Address of Collections Observed N/A.
16. Statement of Integrity The site area remains intact except for the surface which has been disturbed by cultivation. Site materials buried beneath the plowzone would be intact except for natural ground disturbances.
17. Statement of Significance The exact significance of the site and its eligibility to the NRHP remains undetermined pending an extensive subsurface testing and evaluation program. The site and the surrounding field have the potential to yield significant information if substantial intact, buried deposits are present.
18. Comments/References No known impact to the site or immediate area is currently known. The site should be tested prior to impact.

TOPO:

Photocopy, in 8½"x11" format, the portion of the 7.5' U.S.G.S. topographic quadrangle that shows the location of the site and surrounding area. Mark the boundaries of the site on the photocopy.

SEE ATTACHED

Attach the photocopy as a separate page of the Site Form following the Map & Photo Section.

B.W. ☐ Color ☒

Photo I.D. Code _____

Storage Location _____

SKETCH MAP

Sketch Map:

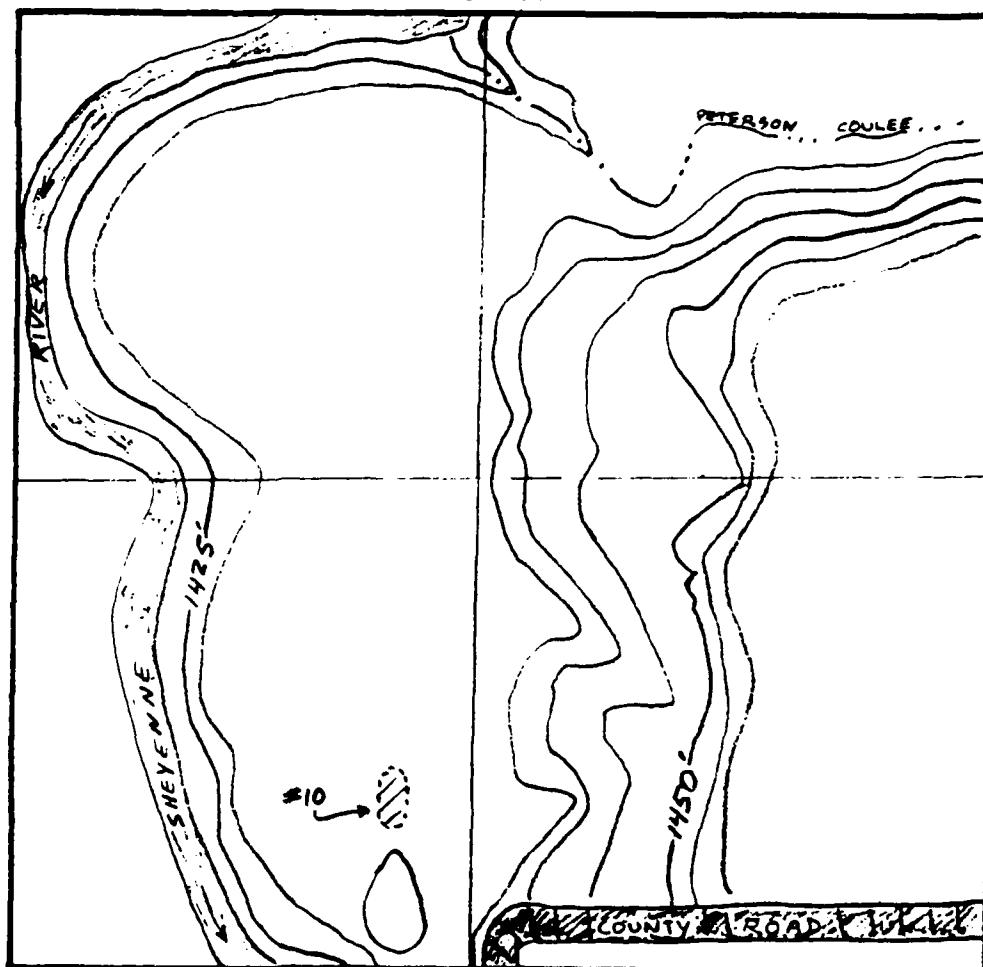
Include north arrow, individual, numbered features, artifact loci, and road or street names.

Architectural sites: include roofridge(s) and dimensions of site.

Map Key:



5 foot Contours

500 FEETMap Scale: APPROXIMATE
SQUARE = 1000'Recorded by M. FloodmanDate OCTOBER 22 1986

Continuation Form

Site Number 32BE21

Item No.

1. Access: ...and proceed 2.0 miles. Turn west and proceed about 1.1 miles to the Sheyenne River valley. As the road makes sharp right angle turn to the south, the site lies straight ahead within the field and slightly north of the county road.

2. Description of Site: ... (NE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$, Section 20). The relationship of these materials to the site are unknown.

Recorded by Mervin G. FloodmanDate October 22, 1986

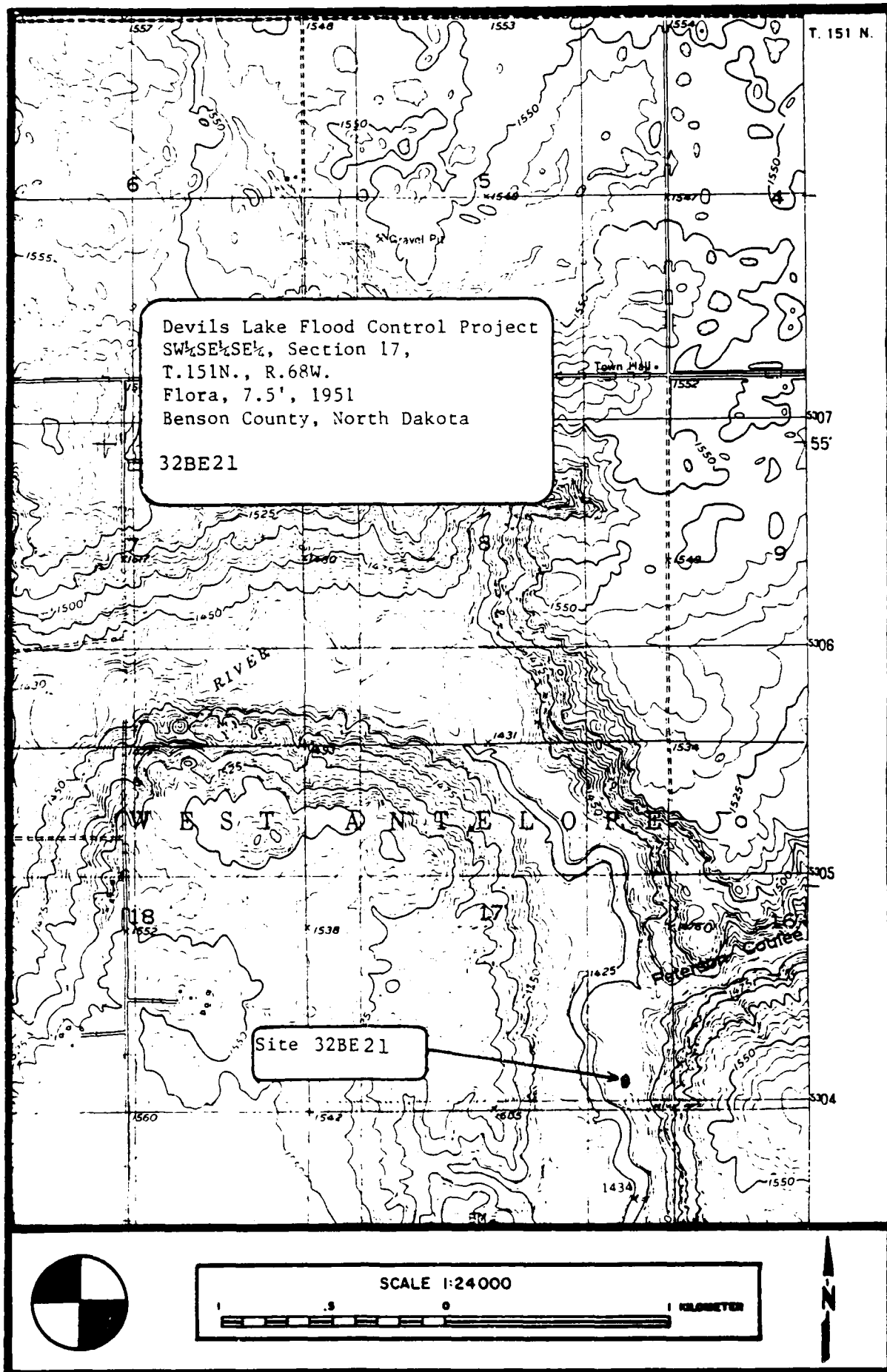
page 6

Devils Lake Flood Control Project
SW $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$, Section 17, T.151N., R.68W.
Benson County, North Dakota

32BE21



Facing south-southeast.



NDCRS SITE FORM
 ARCHEOLOGICAL SITES

Page 1

SITS # 32 B.E. 22
 State County Site Number

Field Code P.E.8.6.D.L.1.1 Site Name _____
 Field Code _____ Site Name _____

Map Quad J.O.S.E.P.H.I.N.E.
 Map Quad _____

LTL	Twp	<u>15.2</u>	R	<u>06.7</u>	Sec	<u>19</u>	QQQ	<u>18</u>	QQ	<u>7</u>	Q	<u>8</u>
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____

1. N
2. E
3. S
4. W
5. NE
6. SE
7. SW
8. NW
9. C

I. SITE I.D.

II. SITE DESCRIPTION

FEATURE TYPE	CULTURAL MATERIAL	
<input type="checkbox"/> Conical Timber Lodge	<input type="checkbox"/> Bone	<u>1.3</u> ^m <u>8.3</u> ^m Site Area
<input checked="" type="checkbox"/> CM Scatter	<input type="checkbox"/> Ceramics	<u>2.0</u> Cultural Depth cm
<input type="checkbox"/> Earthlodge Village	<input type="checkbox"/> Charcoal	<u>4</u> Depth Indicator
<input type="checkbox"/> Earthworks	<input type="checkbox"/> Copper	
<input type="checkbox"/> Fortification	<input type="checkbox"/> Faunal Remains	CULTURAL/TEMPORAL
<input type="checkbox"/> Grave	<input type="checkbox"/> Fire Cracked Rock	AFFILIATION
<input type="checkbox"/> Hearth	<input type="checkbox"/> Floral Remains	=====
<input type="checkbox"/> Jump	<input type="checkbox"/> Fossil	<input type="checkbox"/> Paleo
<input type="checkbox"/> Mound	<input type="checkbox"/> Hide, Hair, Fur	<input type="checkbox"/> Archaic
<input type="checkbox"/> Other Rock Features	<input type="checkbox"/> Human Remains	<input type="checkbox"/> Late Prehistoric
<input type="checkbox"/> Pit	<input type="checkbox"/> Projectile Point	<input type="checkbox"/> Historic
<input type="checkbox"/> Quarry/Mine	<input type="checkbox"/> Shell	<input checked="" type="checkbox"/> Period Unknown
<input type="checkbox"/> Rock Art	<input type="checkbox"/> Stone, Chipped	
<input type="checkbox"/> Rock Shelter	<input checked="" type="checkbox"/> Stone, Ground	
<input type="checkbox"/> Stone Circle	<input type="checkbox"/> Trade Good	
<input type="checkbox"/> Trail	<input type="checkbox"/> Wood	
<input type="checkbox"/> Miscellaneous	<input type="checkbox"/> Other	
<input type="checkbox"/> Isolated Find	<input checked="" type="checkbox"/> CM Density	<input type="checkbox"/> Basis for Dating

III. ENVIRONMENT

<input checked="" type="checkbox"/> Landform 1	<u>0.9</u>	Landform 2	<u>0.7</u>	Slope/Exposure	<u>7</u>	Ecosystem
<input type="checkbox"/> Landform 1	_____	Landform 2	_____	Slope/Exposure	_____	Ecosystem
Elevation	_____	Drainage System	_____	View, Degree	_____	View, Distance
<u>43.0</u> m.	_____	<u>DEVILS LAKE</u>	_____	<u>2</u>	_____	<u>3</u>
Dist Perm Water	<u>40.0</u> m.	Perm Water Type	<u>1</u>	Dist Seas Water	<u>7.62</u> m.	Seas Water Type
						<u>5</u>

IV. U.R.M.

<input checked="" type="checkbox"/> Ownership	<input type="checkbox"/> Ownership
<u>102386</u> Fieldwork Date	_____ Fieldwork Date
<input checked="" type="checkbox"/> Site Condition	<input checked="" type="checkbox"/> Collection
<input type="checkbox"/> Test/Probe	<input checked="" type="checkbox"/> Excavation
Additional Information	<input checked="" type="checkbox"/> Management Recommendation
_____	_____

SHSD USE

<input type="checkbox"/> Soil Association	<input type="checkbox"/> Ecozone	<input type="checkbox"/> Area Signf	_____ MS Number
<input type="checkbox"/> Soil Association	<input type="checkbox"/> Ecozone	<input type="checkbox"/> Area Signf	_____ MS Number
<input type="checkbox"/> CR Type	<input type="checkbox"/> Verified Site	<input type="checkbox"/> Non-Site	<input type="checkbox"/> E C F <input type="checkbox"/> T F
<input type="checkbox"/> State Registry	<input type="checkbox"/> National Register		

Coder _____ Date Coded _____

NDCRS ARCHEOLOGICAL AND HISTORICAL SITE FORMS

Field Code PE-86-DL-11

Descriptive Section
Page 2

SITS Number 32BE22

1. Access From Devils Lake, head south on highway 20/15. As highway 20 turns east, continue on highway 15 in a westerly direction to its junction with highway 281. Turn north on highway 281 0.1 miles and continue due west on 281 3.5 miles. As the highway bends north, turn and continue west on county road. (see continuation sheet)
2. Description of Site The site consists of a relatively sparse scatter of lithic materials located in a cultivated field, fallow at the time of the survey. The majority of materials were found on the west side of the hill between the fence and crest of hill. The hill crest is capped by trees and field clearance rocks. This area of the site was about 50 m north-south by 30 m east-west. On the northeast side of the hill, another smaller concentration of artifacts (four flakes) were found. This hill may have been a source area for chert nodules and the site an area of initial and secondary reduction. The site is above stony lake on the southeast side of the lake.

3. Description of Cultural Materials (Quantify and identify)

<u>One large white chert core</u>	<u>Two secondary chert</u>
<u>One smaller core white chert</u>	<u>One large tertiary chert</u>
<u>Six tertiary flakes white chert</u>	<u>One small tertiary chert</u>
<u>One bifacially retouch chert flake</u>	<u>Four total northeast of hill.</u>
<u>Nine total main area.</u>	

13 # of items of cultural material observed 0 # Collected

4. Artifact Repository N/A.
5. Description of Subsurface Testing No testing was conducted at the site area.

Recorded by Mervin G. Floodman

Date 10-23-86

6. Current Use of Site Wheat cultivation field.
7. Owner's Name/Address Donald M. Almlie.
8. Vegetation Fallow, with dense stubble when surveyed. The hill is covered by dense medium-short grasses and shrub trees.
9. Cover (% of visible ground) 60 to 70%.
10. Man-hours spent on site One hour.
11. Project Title Devils Lake Flood Control Project.
P.I. Mervin G. Floodman
12. Report Title _____
Author _____
13. Other Published References None.
14. Description of Collections Observed None.
15. Owner-Address of Collections Observed N/A.
16. Statement of Integrity The site integrity is poor. The area has very shallow, glacial soils. The cultivation zone has disturbed this level. The potential for significant, intact buried deposits is minimal.
17. Statement of Significance The site is a very sparse activity locus with no diagnostics or tools. The site has very shallow soils disturbed by cultivation. The potential for this site to produce significant, intact cultural materials of relevance to local prehistory is minimal. The site is believed ineligible to the NRHP.
18. Comments/References _____

TOPO:

Photocopy, in 8½"x11" format,
the portion of the 7.5' U.S.G.S.
topographic quadrangle that
shows the location of the site
and surrounding area. Mark the
boundaries of the site on the
photocopy.

Attach the photocopy as a
separate page of the Site
Form following the Map &
Photo Section.

B.W. ☐ Color ☐

Photo I.D. Code _____

Storage Location _____

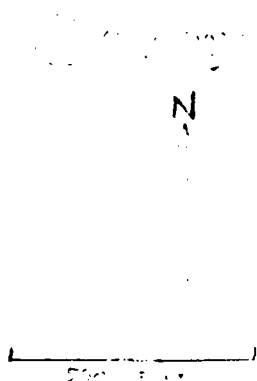
SKETCH MAP

Sketch Map:

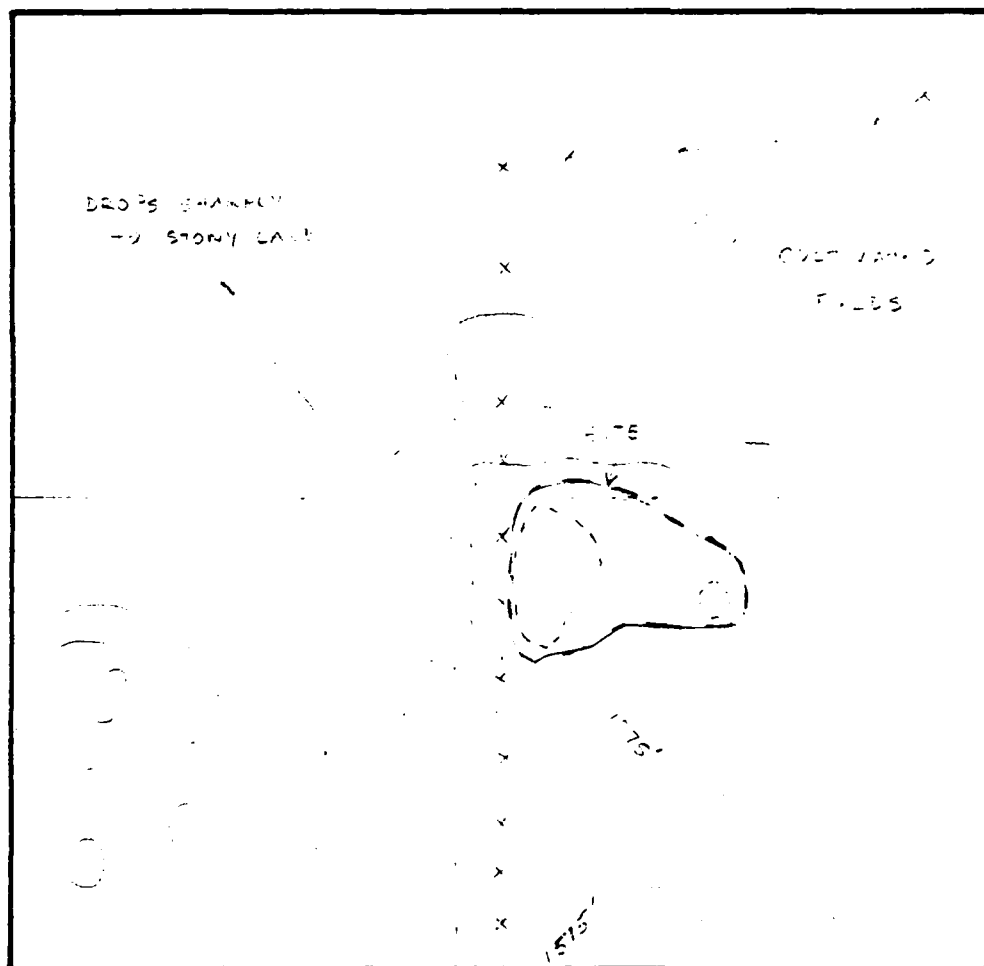
Include north arrow,
individual numbered
features, artifact
loci, and road or
street names.

Architectural sites:
include roof ridge(s)
and dimensions of
site.

Map Key:



Map Scale:



Recorded by _____

Date _____

Continuation Form

Site Number 32BE22

Item No.

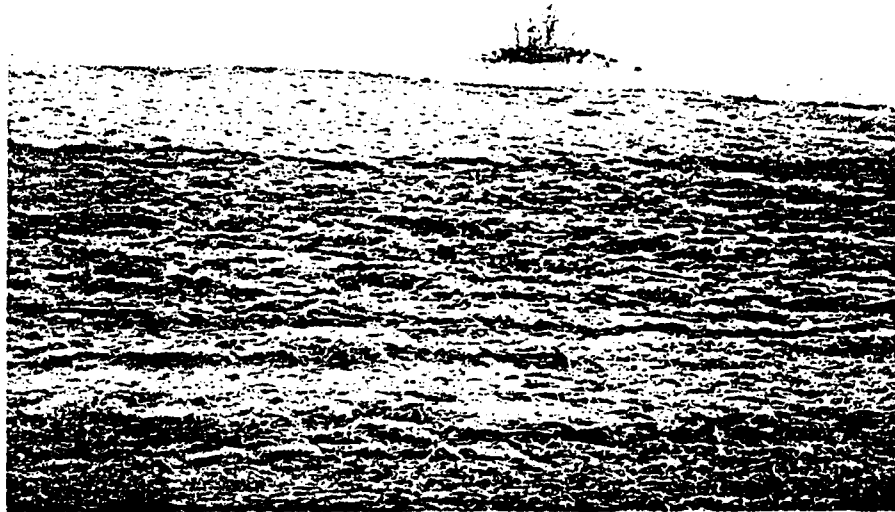
1. Access: Stay on county road due west about 2.0 miles and follow the bend due
south one mile. Turn west and continue two miles. Turn north on the
unimproved field trail. Follow this trail about 0.7 miles to the site.
It lies over the fence in the field to the east side of the trail.

Recorded by Mervin G. FloodmanDate 10-23-86

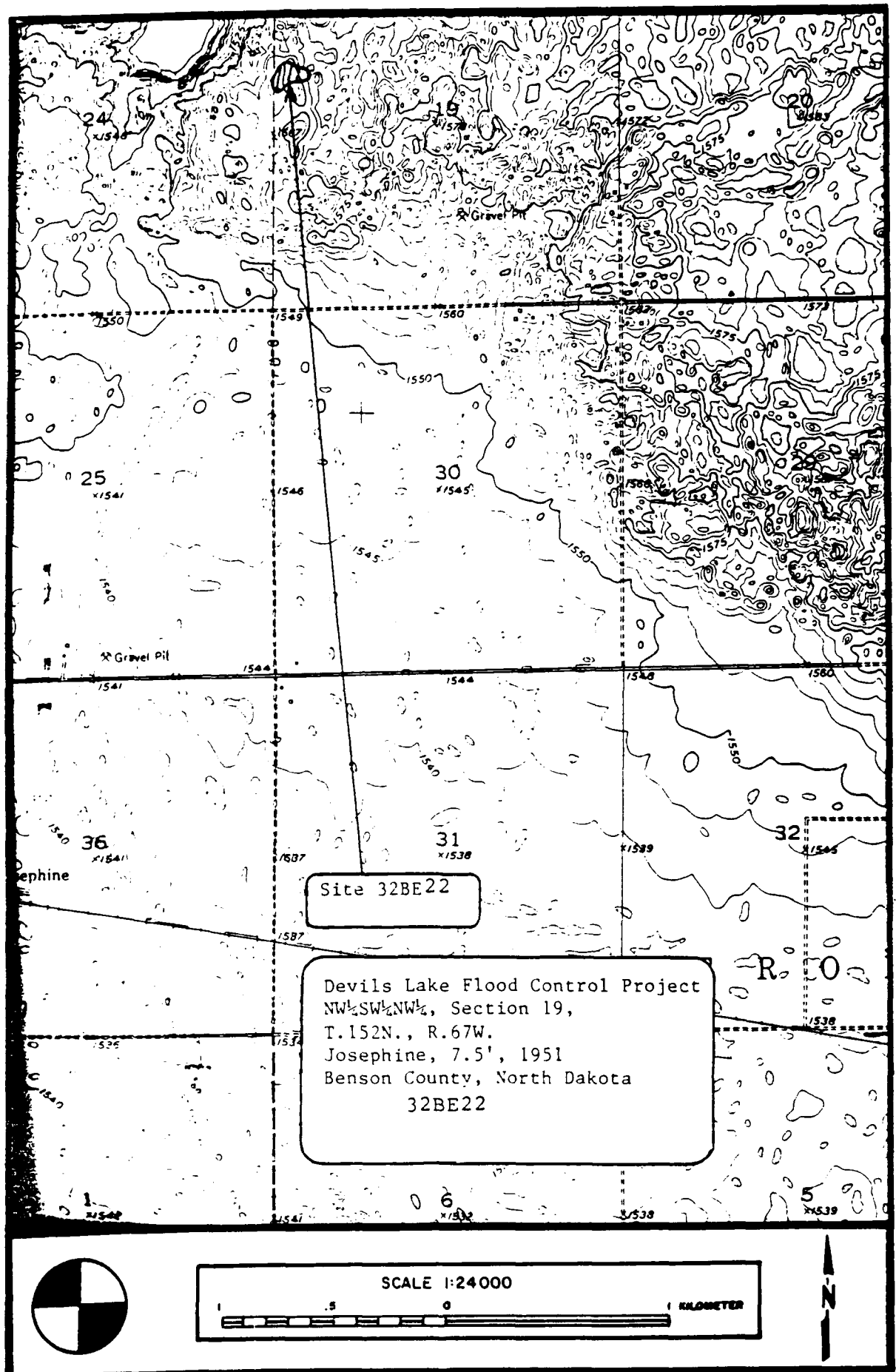
32BE22

page 6

Devils Lake Flood Control Project
SW¹,SW⁴,NW¹, Section 19, T.152N., R.67W.
Benson County, North Dakota



Site 32BE22 , overview toward the
east.



NDCRS SITE FORM
 ARCHEOLOGICAL SITES

Page 1

SITS # 3.2 E.D. 30
 State County Site Number

Field Code P.E.8.6.D.L.8 Site Name _____
 Field Code _____ Site Name _____

Map Quad H.O.R.S.E.S.H.O.E.L.A.K.E.
 Map Quad _____

LTL ☐ Twp 15.0 R 0.6.3 Sec 0.6 QQQ 3 QQ 5 Q 5
 LTL ☐ Twp _____ R _____ Sec _____ QQQ ☐ QQ ☐ Q ☐
 LTL ☐ Twp _____ R _____ Sec _____ QQQ ☐ QQ ☐ Q ☐
 LTL ☐ Twp _____ R _____ Sec _____ QQQ ☐ QQ ☐ Q ☐
 LTL ☐ Twp _____ R _____ Sec _____ QQQ ☐ QQ ☐ Q ☐
 LTL ☐ Twp _____ R _____ Sec _____ QQQ ☐ QQ ☐ Q ☐

1. N
2. E
3. S
4. W
5. NE
6. SE
7. SW
8. NW
9. C

FEATURE TYPE	CULTURAL MATERIAL	<u>2.7</u> <u>0.0</u> m. x m. Site Area
<input type="checkbox"/> Conical Timber Lodge	<input type="checkbox"/> Bone	<u>2.0</u> Cultural Depth cm.
<input checked="" type="checkbox"/> CM Scatter	<input type="checkbox"/> Ceramics	<u>4</u> Depth Indicator
<input type="checkbox"/> Earthlodge Village	<input type="checkbox"/> Charcoal	
<input type="checkbox"/> Earthworks	<input type="checkbox"/> Copper	CULTURAL/TEMPORAL
<input type="checkbox"/> Fortification	<input type="checkbox"/> Faunal Remains	AFFILIATION
<input type="checkbox"/> Grave	<input type="checkbox"/> Fire Cracked Rock	=====
<input type="checkbox"/> Hearth	<input type="checkbox"/> Floral Remains	<input type="checkbox"/> Paleo
<input type="checkbox"/> Jump	<input type="checkbox"/> Fossil	<input type="checkbox"/> Archaic
<input type="checkbox"/> Mound	<input type="checkbox"/> Hide, Hair, Fur	<input type="checkbox"/> Late Prehistoric
<input type="checkbox"/> Other Rock Features	<input type="checkbox"/> Human Remains	<input type="checkbox"/> Historic
<input type="checkbox"/> Pit	<input type="checkbox"/> Projectile Point	<input type="checkbox"/> Period Unknown
<input type="checkbox"/> Quarry/Mine	<input type="checkbox"/> Shell	
<input type="checkbox"/> Rock Art	<input checked="" type="checkbox"/> Stone, Chipped	
<input type="checkbox"/> Rock Shelter	<input type="checkbox"/> Stone, Ground	
<input type="checkbox"/> Stone Circle	<input type="checkbox"/> Trade Good	
<input type="checkbox"/> Trail	<input type="checkbox"/> Wood	
<input type="checkbox"/> Miscellaneous	<input type="checkbox"/> Other	
<input type="checkbox"/> Isolated Find	<input checked="" type="checkbox"/> CM Density	<u>0</u> Basis for Dating

☒ Landform 1 0.7 Landform 2 1.0 Slope/Exposure 7 Ecosystem
☐ Landform 1 _____ Landform 2 _____ Slope/Exposure _____ Ecosystem
 Elevation _____ Drainage System _____ View, Degree _____ View, Distance _____
4.5.3 m. DE.V.I.L.S.L.A.K.E. 4 3
 Dist Perm Water 9.1.1 m. Perm Water Type 1 Dist Seas Water 6.4.0 m. Seas Water Type 5

3 Ownership _____ Ownership _____
1.0.1.7.8.6 Fieldwork Date _____ Fieldwork Date _____
5 Site Condition 1 Collection 0 Test/Probe 0 Excavation
 Additional Information _____ Management Recommendation _____

☐ Soil Association ☐ Ecozone ☐ Area Sign _____ MS Number
☐ Soil Association ☐ Ecozone ☐ Area Sign _____ MS Number
☐ CR Type ☐ Verified Site ☐ Non-Site ☐ E C F ☐ T F
☐ State Registry ☐ National Register

Coder _____

Date Coded _____

I. SITE I.D.

II. SITE DESCRIPTION

III. ENVIRONMENT

IV. C.R.M.

SHSND USE

NDCRS ARCHEOLOGICAL AND HISTORICAL SITE FORMS

Field Code PE-86-DL-8

Descriptive Section

SITS Number 32ED30

Page 2

1. Access From Devils Lake, head south on highway 20. Be sure to turn east on highway 20 across the bridge over Devils Lake and continue south and east on the main highway. About 2.75 miles over the bridge, the highway bends due south. About seven miles further, the highway bends due east. Four miles further, the road bends due south again. (see continuation sheet)
2. Description of Site The site consists of a prehistoric lithic scatter found in a cultivated field of immature wheat at the time of the survey. The site is adjacent to the west edge of the first line of wind break trees west of the county road on the east section-line. The site extends some 90 m north-south by 30 m east-west. The site may extend east across the tree line into the alfalfa field. Visibility in this field was limited and no materials were found. The site is located on a flat, low rise on an open plain with very little relief. A lower swale lies to the west. The presence of this site on the open, flat plain was unexpected. Soils are very sandy loams which are most likely aeolian in origin. Good buried potential exist. The site is southeast of the northeastern-most extension of Horseshoe Lake. The site may well be associated with a higher level of this lake.
3. Description of Cultural Materials (Quantify and identify) The cultural materials are primarily a white chert. No finished tools or diagnostics were located. Observed 21 chert flakes, two large cores and core fragments of chert, three flakes Tongue River Silicified Sediment, and eight quartzite flakes. Some pieces have minor retouch. There are some large cobbles within the site area associated with lithics and may be manuports.
- 34 # of items of cultural material observed 0 # Collected
4. Artifact Repository N/A
5. Description of Subsurface Testing No subsurface testing was conducted at the site.

Recorded by Mervin G. FloodmanDate 10-17-86

NDCRS ARCHEOLOGICAL AND HISTORICAL SITE FORMS

Field Code PE-86-DL-8

Descriptive Section

SITS Number 32ED30

Page 3

6. Current Use of Site Cultivated fields, wheat and alfalfa.
7. Owner's Name/Address _____
8. Vegetation Sparse immature wheat at time of survey.
9. Cover (% of visible ground) 80%.
10. Man-hours spent on site 1.5
11. Project Title Devils Lake Flood Control Project.
P.I. Mervin G. Floodman
12. Report Title _____
Author
13. Other Published References None
14. Description of Collections Observed None
15. Owner-Address of Collections Observed N/A
16. Statement of Integrity The site integrity has been disturbed by the cultivation.
The sandy loam soil does have good potential for buried cultural materials
beneath the disturbed plowzone. Other than cultivation, no erosional forces
are disturbing the site.
17. Statement of Significance The site is of undetermined significance and National
Register eligibility pending a subsurface evaluation to determine and assess
the nature and extent of the site's buried cultural materials.
18. Comments/References _____

Recorded by Mervin G. FloodmanDate 10-17-87

TOPO:

Photocopy, in 8½"x11" format,
the portion of the 7.5' U.S.G.S.
topographic quadrangle that
shows the location of the site
and surrounding area. Mark the
boundaries of the site on the
photocopy.

SEE ATTACHED

Attach the photocopy as a
separate page of the Site
Form following the Map &
Photo Section.

B.W. ☐ Color ☐

Photo I.D. Code _____

Storage Location _____

SKETCH MAP

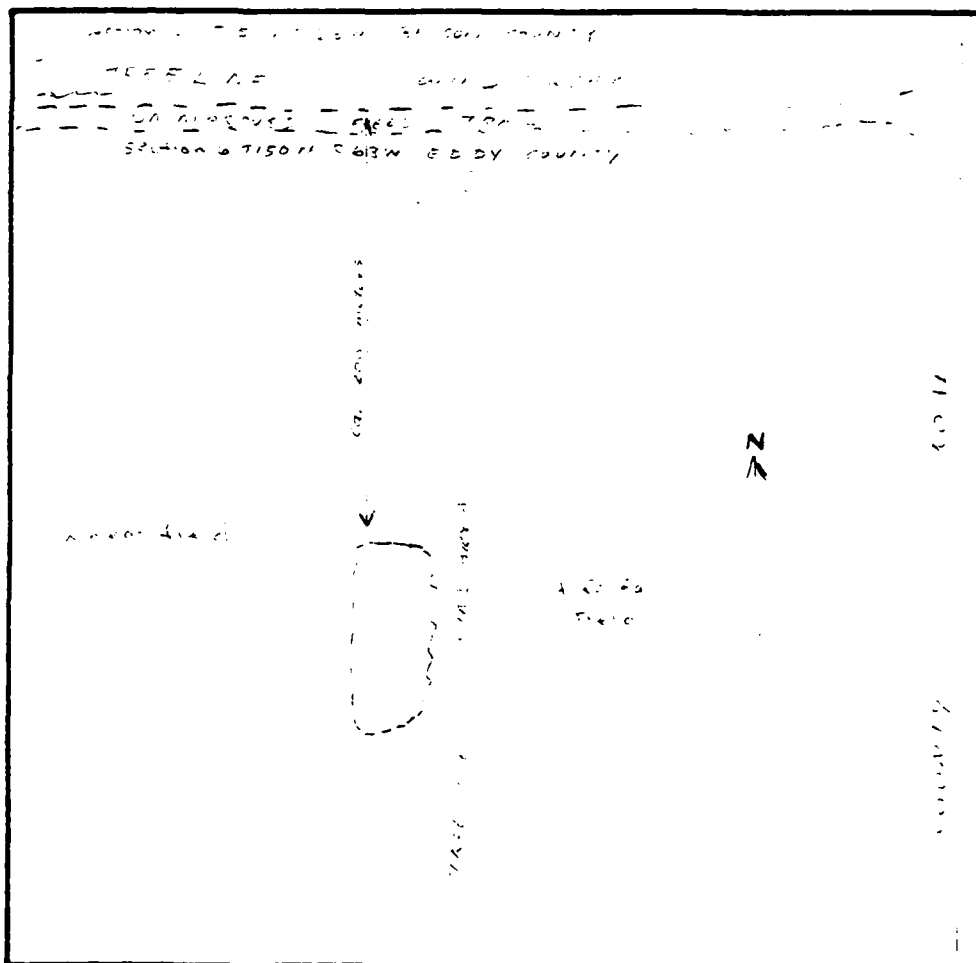
Sketch Map:

Include north arrow,
individual numbered
features, artifact
loci, and road or
street names.

Architectural sites:
include roof ridge(s)
and dimensions of
site.

Map Key:

Map Scale:



Recorded by _____

Date 10 _____

Continuation Form

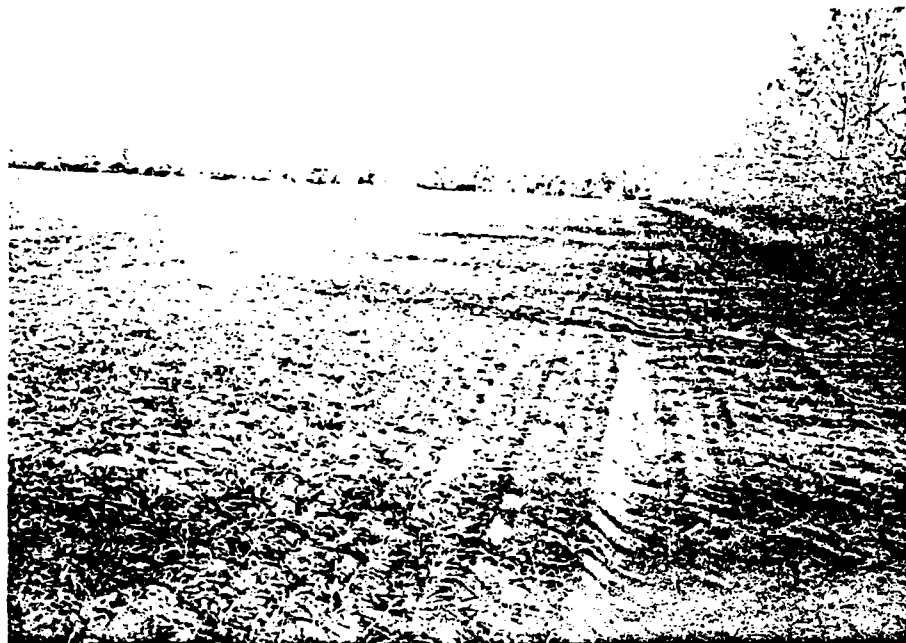
Site Number 32ED30

Item No.

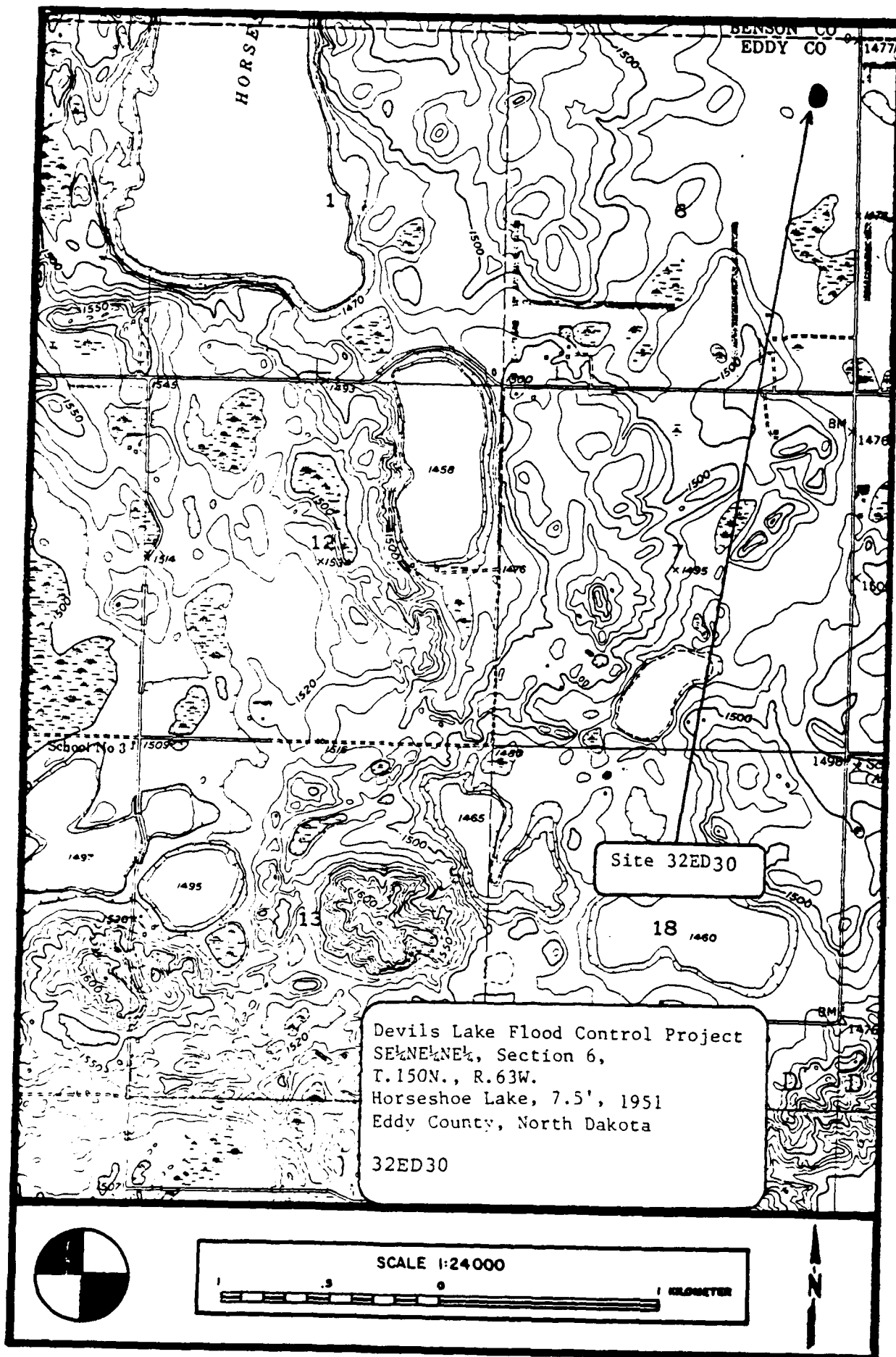
1. ACCESS: Continue six miles (past Warwick) to a point where the highway bends
due east again. Continue straight south off the highway on county
road turnoff 0.2 miles. Turn west on county road for 2.0 miles. Turn
north on county road 1.0 miles. Turn west on unimproved dirt field
trail to the first line of trees. The site lies south along this
windbreak, on the west edge, about 0.8 miles.

Recorded by Mervin G. FloodmanDate 10-17-86

Devils Lake Flood Control Project
SE 1/4 NE 1/4, Section 6, T.150N., R.63W.
Eddy County, North Dakota
page 6



Site 32ED30 , overview toward the north.



Devils Lake Flood Control Project
SE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$, Section 6,
T.150N., R.63W.
Horseshoe Lake, 7.5', 1951
Eddy County, North Dakota

32ED30

SCALE 1:24 000

1 KILOMETER

NDCRS SITE FORM
HISTORICAL ARCHEOLOGICAL SITES

Page 1

I. SITE I.D.

SITS # 32 NE 34
State County Site Number

Field Code PE86DL4 Site Name Bloud Dump
Field Code _____ Site Name _____

Map Quad _____ T.O.L.N.A.
Map Quad _____

LTL	Twp	<u>151</u>	R	<u>061</u>	Sec	<u>33</u>	QQQ	<u>1</u>	QQ	<u>8</u>	Q	<u>7</u>
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____

II. SITE DESCRIPTION

FEATURE TYPE	CULTURAL MATERIAL	<u>10</u> Site Type
<input type="checkbox"/> Cm Scatter	<input type="checkbox"/> Bone	<u>13</u> Context
<input type="checkbox"/> Chimney	<input type="checkbox"/> Ceramics	<u>5551</u> Site Area
<input type="checkbox"/> Depression	<input type="checkbox"/> Charcoal	m. x m.
<input type="checkbox"/> Dump	<input type="checkbox"/> Cloth	<u>_____</u> Cultural Depth cm.
<input type="checkbox"/> Earthworks	<input type="checkbox"/> Faunal Remains	<input type="checkbox"/> Depth Indicator
<input type="checkbox"/> Fortification	<input type="checkbox"/> Fire Cracked Rock	Occupation Date
<input type="checkbox"/> Foundation	<input type="checkbox"/> Floral Remains	Begin _____ End _____
<input type="checkbox"/> Grave	<input type="checkbox"/> Glass	<u>_____</u> Basis For Dating
<input type="checkbox"/> Hearth	<input type="checkbox"/> Hide, Hair, Fur	<u>2</u> Cm Density
<input type="checkbox"/> Machinery	<input type="checkbox"/> Human Remains	<u>0</u> Isolated Find
<input type="checkbox"/> Quarry/Mine	<input type="checkbox"/> Masonry	
<input type="checkbox"/> Rock Art	<input type="checkbox"/> Metal	
<input type="checkbox"/> Trail	<input type="checkbox"/> Plastic	
<input type="checkbox"/> Wreck	<input type="checkbox"/> Rubber	
<input type="checkbox"/> Other	<input type="checkbox"/> Shell	
	<input type="checkbox"/> Wood	
	<input type="checkbox"/> Other	

III. ENVIRONMENT

<input type="checkbox"/> Landform 1 <u>07</u>	Landform 2 <u>10</u>	Slope/Exposure <u>_____</u>	Ecosystem <u>_____</u>
<input type="checkbox"/> Landform 1 _____	Landform 2 _____	Slope/Exposure _____	Ecosystem _____
Elevation <u>454</u> m.	Drainage System <u>SHEYENNE RIVER</u>	View, Degree <u>4</u>	View, Distance <u>3</u>
Dist Perm Water <u>8046</u> m.	Perm Water Type <u>3</u>	Dist Seas Water <u>1555</u> m.	Seas Water Type <u>4</u>

IV. C.R.M.

<u>3</u> Ownership	<input type="checkbox"/> Ownership
<u>110115186</u> Fieldwork Date	<u>_____</u> Fieldwork Date
<u>3</u> Site Condition	<u>0</u> Collection
<u>0</u> Test/Probe	<u>0</u> Excavation
Additional Information _____	<u>1</u> Management Recommendation

SHSND USE

<input type="checkbox"/> Soil Association	<input type="checkbox"/> Ecozone	<input type="checkbox"/> Area Signf	<u>_____</u> MS Number
<input type="checkbox"/> Soil Association	<input type="checkbox"/> Ecozone	<input type="checkbox"/> Area Signf	<u>_____</u> MS Number
<input type="checkbox"/> CR Type	<input type="checkbox"/> Verified Site	<input type="checkbox"/> Non-Site	<input type="checkbox"/> E C F <input type="checkbox"/> T F
<input type="checkbox"/> State Registry	<input type="checkbox"/> National Register		

Order

Date Coded

1. N
2. E
3. S
4. W
5. NE
6. SE
7. SW
8. NW
9. C

NDCRS ARCHEOLOGICAL AND HISTORICAL SITE FORMS

Field Code PE-86-DL-4

Descriptive Section

SITS Number 32NE34

Page 2

1. Access From Devils Lake, head east on Highway 2 to Lakota. Turn south on Highway 1 and continue about 18 miles. Turn west onto county road to Pekin. Go through Pekin and continue northwest on diagonal road. As the road turns due west, continue four miles. Turn north and proceed four miles (passing through Tolna). (see continuation sheet)
2. Description of Site The site consists of an historic cultural material scatter located in a fallow cultivated field at the time of the survey. The scatter is located around, and mostly east of, a large rock pile resulting from field clearance. There is no evidence of cultural features or depressions to indicate a homestead. The site is probably an old dump or garbage area.
3. Description of Cultural Materials (Quantify and identify) A medium dense scatter of purple glass bottle fragments, crockery, burnt glass, aqua glass, assorted bottle fragments, a horseshoe, and metal fragments make up most of the site in the field area. Within the rock pile, some machinery is present including a horsedrawn rake, disc and engine.
- # of items of cultural material observed 0 # Collected
4. Artifact Repository N/A.
5. Description of Subsurface Testing No subsurface testing was conducted.

Recorded by Mervin G. FloodmanDate October 15, 1986

NDCRS ARCHEOLOGICAL AND HISTORICAL SITE FORMS

Field Code PE-86-DL-4

Descriptive Section

SITS Number 32NE34

Page 3

6. Current Use of Site Cultivated field and rock clearance pile.
7. Owner's Name/Address Obert Rismon, Tolna, ND.
8. Vegetation At the time of the survey, entirely clear and fallow surrounded wheat stubble fields. Some grasses around a rock pile.
9. Cover (% of visible ground) 100%.
10. Man-hours spent on site 1 hour.
11. Project Title Devils Lake Flood Control Project.
P.I. Mervin G. Floodman
12. Report Title _____
Author _____
13. Other Published References None.
14. Description of Collections Observed None.
15. Owner-Address of Collections Observed N/A.
16. Statement of Integrity The site is lacking in cultural integrity. The entire area is under cultivation. The materials are broken into small fragments and scattered around the field.
17. Statement of Significance The site is not significant. The materials were not the result of a homestead located and is merely an old dump or garbage area now in cultivation. The materials are not unique or of particular significance. The site will not yield information pertinent to the NRHP and is not eligible to the NRHP.
18. Comments/References _____

Recorded by Mervin G. FloodmanDate October 15, 1986

TOPO:

SEE ATTACHED - Map and Photo

Photocopy, in 8½"x11" format,
the portion of the 7.5' U.S.G.S.
topographic quadrangle that
shows the location of the site
and surrounding area. Mark the
boundaries of the site on the
photocopy.

Attach the photocopy as a
separate page of the Site
Form following the Map &
Photo Section.

B.W. ☐ Color ☐

Photo I.D. Code _____

Storage Location _____

SKETCH MAP

Sketch Map:

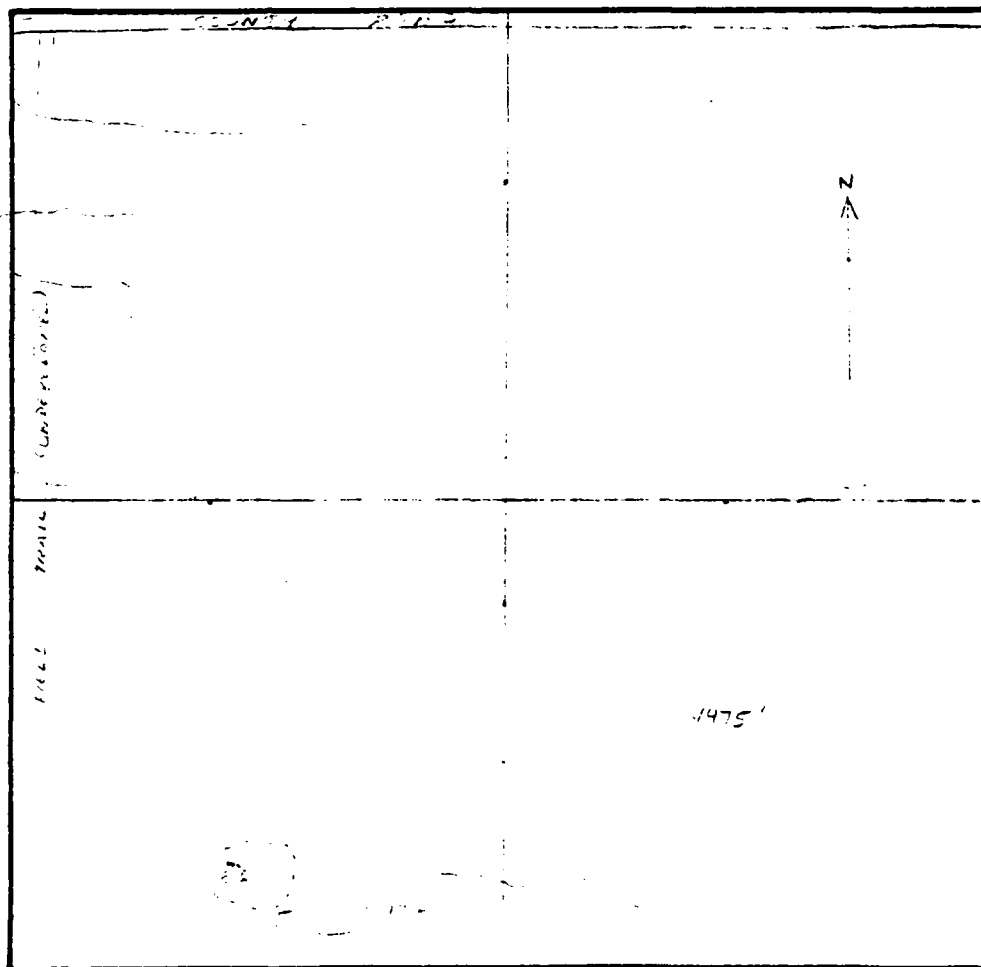
Include north arrow,
individual numbered
features, artifact
loci, and road or
street names.

Architectural sites:
include roof ridge(s)
and dimensions of
site.

Map Key:

To be filled in

Map Scale:

Recorded by W. J. [illegible]Date October 5, 1962

Continuation Form

Site Number 32NE34

Item No.

1. Access: Turn west on county road and proceed two miles. Turn south on field trail (undeveloped) and proceed 0.5 miles. The site lies in a cultivated field about 0.8 miles to the east by a large rock pile.

Deed and Title Search Documentation:

PE-86-DL-4 NW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 33, T.151N., R.61W.

Vol.	Page	Document #	Date	Conveyance	Location
39	519	16004	7-2-1919	Peter L. Ploud, Homestead	E $\frac{1}{2}$ SE $\frac{1}{4}$ Sec. 32
				Receivers Receipt #7862,	W $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 33
				Application 17216.	
80	538	17063	12-18-1903	Peter Ploud to Mabel Ploud	
77	633	42653	11-13-1915	Tosten E. Stene to Mabel Ploud	
135	97	44709	12-1-1916	Peter Ploud to Mabel Ploud	
				Warranty Deed.	
138	53	44718	11-23-1916	Mabel Ploud to Ole Teigen	
36	544	44864	12-13-1916	USA to Peter Ploud, filed for record.	
136	297	66024	11-10-1930	Ole Teigen to Anna Teigen	
174	8	78598	7-18-1944	Option for purchase. Anna and Ole Tiegen to Obert Rismon and wife.	
174	50	78780	10-3-1944	Ole and Anna Tiegen to Obert and Gina Rismon, option to purchase.	
173	491	78991	12-12-1944	Ole and Anna Tiegen to Obert and Gina Rismon, warranty deed.	
186	380	91080	11-13-1957	Order establishing irrigation district.	
214	626	116167	7-23-1980	Obert and Gina Rismon to Obert and Gina Rismon, warranty deed.	
220	15	116287	9-24-1980	Obert and Gina Rismon to Obert Risman WD.	

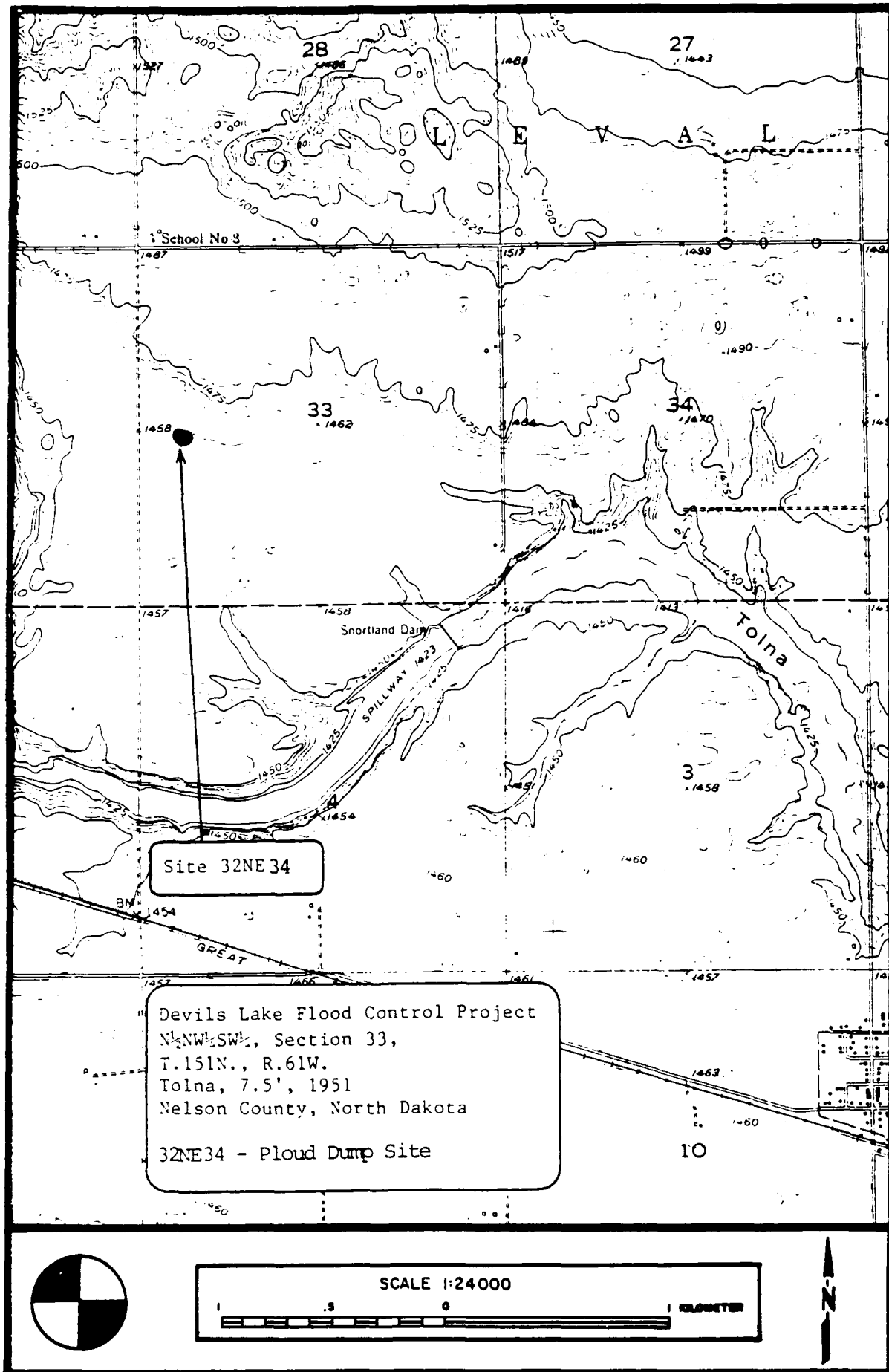
Recorded by _____ Date _____

Devils Lake Flood Control Project
T.151N., R.61W., Section 33,
Bismarck County, North Dakota

32NE34
page 6



Looking west at site 32NE34



NDCRS SITE FORM
 ARCHEOLOGICAL SITES

Page 1

SITS # 3.2 NE 35
 State County Site Number

Field Code P.E.8.6.D.L.7 Site Name _____
 Field Code _____ Site Name _____

Map Quad D.E.V.I.L.S. L.A.K.E. M.O.U.N.T.A.I.N.
 Map Quad _____

LTL <input type="checkbox"/> Twp <u>1.5.1</u>	R <u>0.6.1</u>	Sec <u>1.9</u>	QQQ <u>8</u>	QQ <u>7</u>	Q <u>8</u>
LTL <input type="checkbox"/> Twp _____	R _____	Sec _____	QQQ _____	QQ _____	Q _____
LTL <input type="checkbox"/> Twp _____	R _____	Sec _____	QQQ _____	QQ _____	Q _____
LTL <input type="checkbox"/> Twp _____	R _____	Sec _____	QQQ _____	QQ _____	Q _____
LTL <input type="checkbox"/> Twp _____	R _____	Sec _____	QQQ _____	QQ _____	Q _____
LTL <input type="checkbox"/> Twp _____	R _____	Sec _____	QQQ _____	QQ _____	Q _____

1. N $\frac{1}{2}$
2. E $\frac{1}{2}$
3. S $\frac{1}{2}$
4. W $\frac{1}{2}$
5. NE $\frac{1}{4}$
6. SE $\frac{1}{4}$
7. SW $\frac{1}{4}$
8. NW $\frac{1}{4}$
9. C

I. SITE I.D.

II. SITE DESCRIPTION

FEATURE TYPE	CULTURAL MATERIAL	<u>2.3</u> <u>3.7</u> ^{m.} Site Area
<input type="checkbox"/> Conical Timber Lodge	<input type="checkbox"/> Bone	<u>2.0</u> Cultural Depth ^{cm.}
<input checked="" type="checkbox"/> CM Scatter	<input type="checkbox"/> Ceramics	<u>4</u> Depth Indicator
<input type="checkbox"/> Earthlodge Village	<input type="checkbox"/> Charcoal	
<input type="checkbox"/> Earthworks	<input type="checkbox"/> Copper	CULTURAL/TEMPORAL
<input type="checkbox"/> Fortification	<input type="checkbox"/> Faunal Remains	AFFILIATION
<input type="checkbox"/> Grave	<input type="checkbox"/> Fire Cracked Rock	=====
<input type="checkbox"/> Hearth	<input type="checkbox"/> Floral Remains	<input type="checkbox"/> Paleo
<input type="checkbox"/> Jump	<input type="checkbox"/> Fossil	<input type="checkbox"/> Archaic
<input type="checkbox"/> Mound	<input type="checkbox"/> Hide, Hair, Fur	<input type="checkbox"/> Late Prehistoric
<input type="checkbox"/> Other Rock Features	<input type="checkbox"/> Human Remains	<input type="checkbox"/> Historic
<input type="checkbox"/> Pit	<input type="checkbox"/> Projectile Point	<input checked="" type="checkbox"/> Period Unknown
<input type="checkbox"/> Quarry/Mine	<input type="checkbox"/> Shell	
<input type="checkbox"/> Rock Art	<input checked="" type="checkbox"/> Stone, Chipped	
<input type="checkbox"/> Rock Shelter	<input type="checkbox"/> Stone, Ground	
<input type="checkbox"/> Stone Circle	<input type="checkbox"/> Trade Good	
<input type="checkbox"/> Trail	<input type="checkbox"/> Wood	
<input type="checkbox"/> Miscellaneous	<input type="checkbox"/> Other	
<input type="checkbox"/> Isolated Find	<input checked="" type="checkbox"/> CM Density	<u>0</u> Basis for Dating

III. ENVIRONMENT

<input checked="" type="checkbox"/> Landform 1 <u>0.7</u>	Landform 2 <u>1.0</u>	Slope/Exposure _____	Ecosystem <u>7</u>
<input type="checkbox"/> Landform 1 _____	Landform 2 _____	Slope/Exposure _____	Ecosystem _____
Elevation _____	Drainage System _____	View, Degree _____	View, Distance _____
<u>4.3.6</u> m.	<u>S.H.E.Y.E.N.N.E. R.I.V.E.R</u>	<u>4</u>	<u>3</u>
Dist Perm Water <u>4.1.0.0</u> m.	Perm Water Type <u>1</u>	Dist Seas Water <u>1.8.0</u> m.	Seas Water Type <u>4</u>

IV. C.R.M.

<u>3</u> Ownership	<input type="checkbox"/> Ownership
<u>1.0.1.6.8.6</u> Fieldwork Date	_____ Fieldwork Date
<u>2</u> Site Condition	<u>1</u> Collection
<u>0</u> Test/Probe	<u>0</u> Excavation
Additional Information _____	<u>4</u> Management Recommendation _____

SHSND USE

<input type="checkbox"/> Soil Association	<input type="checkbox"/> Ecozone	<input type="checkbox"/> Area Signf	_____ MS Number
<input type="checkbox"/> Soil Association	<input type="checkbox"/> Ecozone	<input type="checkbox"/> Area Signf	_____ MS Number
<input type="checkbox"/> CR Type	<input type="checkbox"/> Verified Site	<input type="checkbox"/> Non-Site	<input type="checkbox"/> E C F <input type="checkbox"/> T F
<input type="checkbox"/> State Registry	<input type="checkbox"/> National Register		

Coder _____ Date Coded _____

NDCRS ARCHEOLOGICAL AND HISTORICAL SITE FORMS

Field Code PE-86-DL-7

Descriptive Section
Page 2

SITS Number 32NE35

1. Access From Devils Lake, head east on highway 2. Continue to Dovon. Turn south on county road just east of the town. Continue due south 2.0 miles. Follow the jog in the road to the east and then due south again. Proceed 9.0 miles to the intersection of the east-west county road. Continue south about 0.3 miles to a point where the road turns to the southwest. (continuation)

2. Description of Site The site is located on the flat upper prairie overlooking a deep outwash channel to the east and south. The site is currently under small grain cultivation. The site is a prehistoric lithic scatter. The site materials are widely scattered over an area approximately 57 m east-west by 41 m north-south. Most of the artifacts were tightly concentrated with only a few more widely scattered. Soils are dark brown loams with a high pebble and cobble content. The field was fallow at the time of the project survey.

3. Description of Cultural Materials (Quantify and identify) _____

One reddish-orange chert interior flake

One Knife River flint secondary flake

One

One white chert retouched/utilized flake

One white chert core fragment

One white chert core

One quartzite primary flake, utilized (see continuation sheet)

10 # of items of cultural material observed 0 # Collected

4. Artifact Repository N/A.

5. Description of Subsurface Testing No subsurface testing was conducted at the site.

Recorded by Mervin G. Floodman

Date 10-16-86

NDLKS ARCHEOLOGICAL AND HISTORICAL SITE FORMS

Field Code PE-86-DL-7

Descriptive Section

SITS Number 32NE35

Page 3

6. Current Use of Site Small grain cultivation.
7. Owner's Name/Address Robert P. Johnson, Tolna, North Dakota.
8. Vegetation Sparse grass and wheat stubble.
9. Cover (% of visible ground) 80 to 90%.
10. Man-hours spent on site 1 hour.
11. Project Title Devils Lake Flood Control Project.
P.I. Mervin G. Floodman
12. Report Title _____
Author
13. Other Published References None.
14. Description of Collections Observed None.
15. Owner-Address of Collections Observed N/A.
16. Statement of Integrity The site is disturbed by surface cultivation and agriculture. It is not known if any sub-plowzone deposits are present at the site. Other than the cultivation, the site is not disturbed or eroding.
17. Statement of Significance The significance and National Register eligibility of the site are undetermined pending a subsurface testing program to evaluate the nature and extent of any possible intact, buried cultural deposits.
18. Comments/References _____

Recorded by Mervin G. FloodmanDate 10-16-86

TOPO:

Photocopy, in 8½"x11" format, the portion of the 7.5' U.S.G.S. topographic quadrangle that shows the location of the site and surrounding area. Mark the boundaries of the site on the photocopy.

SEE ATTACHED
Map and Photo

Attach the photocopy as a separate page of the Site Form following the Map & Photo Section.

B.W. ☐ Color ☐

Photo I.D. Code _____

Storage Location _____

SKETCH MAP

Sketch Map:

Include north arrow, individual numbered features, artifact loci, and road or street names.

Architectural sites: include roof ridge(s) and dimensions of site.

Map Key:

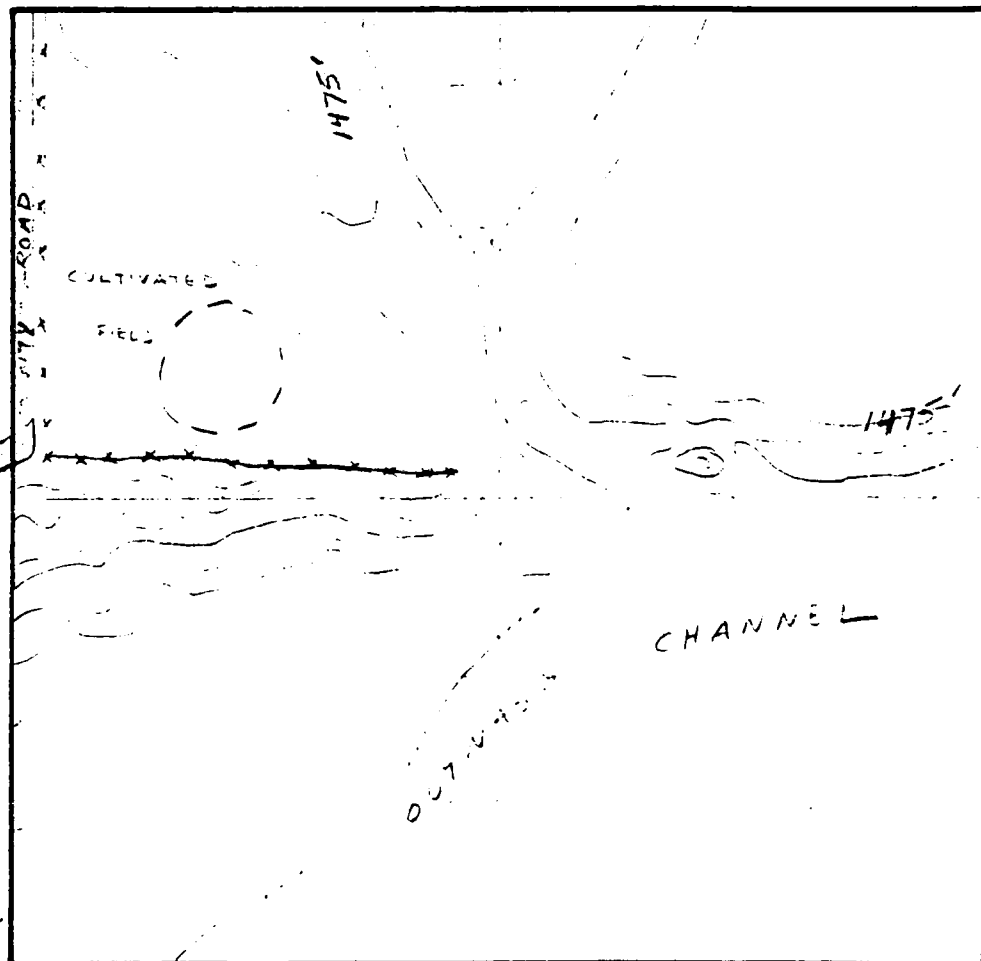
○ SITE

← ROAD

— CULTIVATED FIELD

100' SCALE

Map Scale: 1:25000



Recorded by W. Friedman

Date 10/16/86

Continuation Form

Site Number 32NE35

Item No.

1. Access: The site lies in the field east of the road at this point about 200 m.

The site is on the upper area above the deep outwash channel.

3. Description of Cultural Materials (Quantify and identify)

One white chert biface fragment.

One white chert interior flake.

One white chert interior flake.

Recorded by Mervin G. Floodman

Date 10-16-86

Devils Lake Flood Control Project
NW, SW, NW, Section 19,
T. 51N., R. 61W.
Wilson County, North Dakota

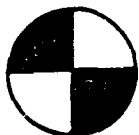
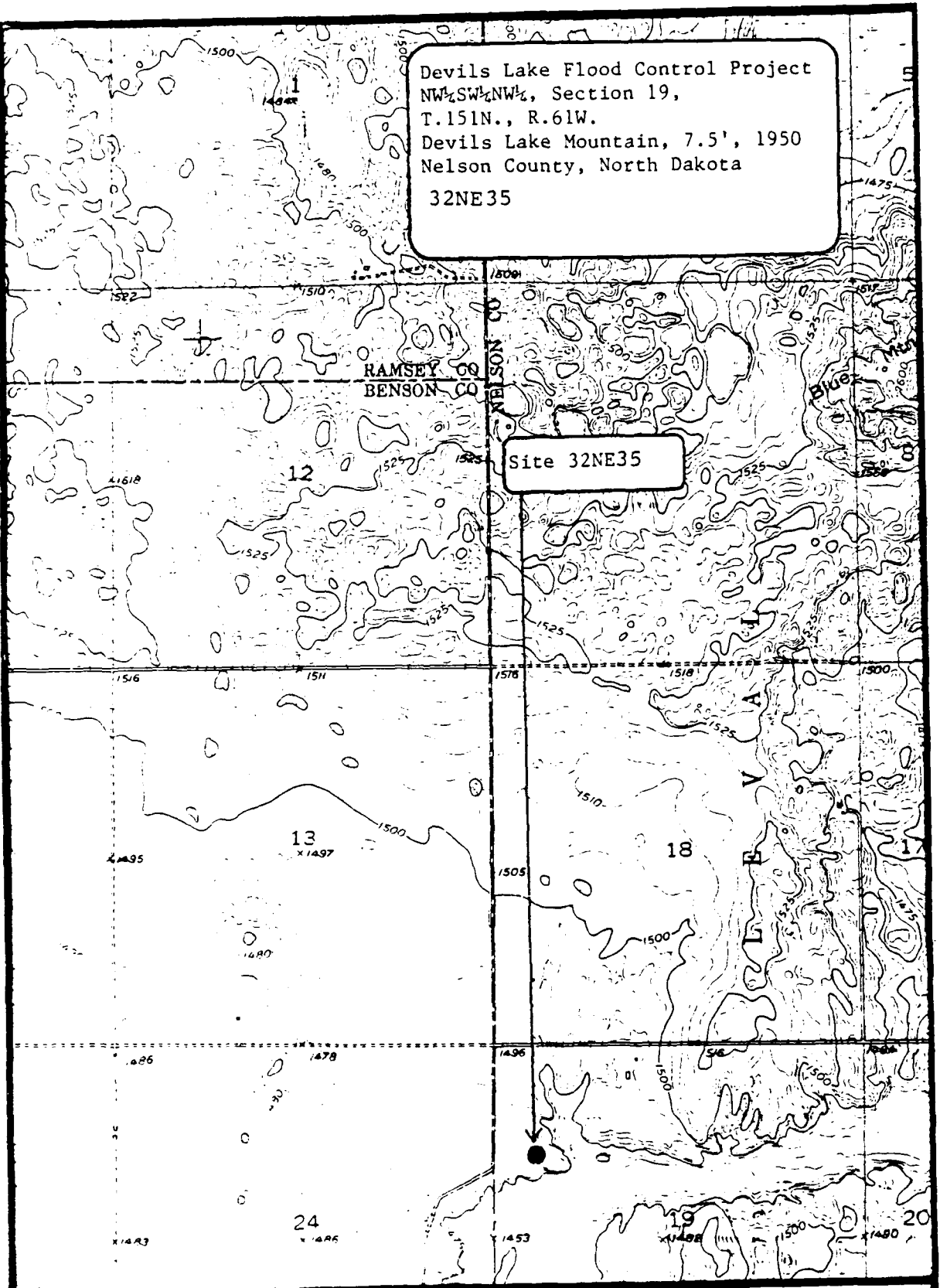
32NE35

page 6

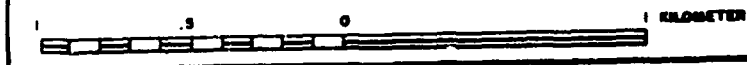


Site 32NE35, view toward the
southeast.

Devils Lake Flood Control Project
NW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$, Section 19,
T.151N., R.61W.
Devils Lake Mountain, 7.5', 1950
Nelson County, North Dakota
32NE35



SCALE 1:24 000



NDCRS SITE FORM
HISTORICAL ARCHEOLOGICAL SITES

Page 1

I. SITE I.D.

SITS # 32 NE 36
State County Site Number
Field Code P.E.8.6.D.L.1 Site Name Paulson Foundation Site
Field Code _____ Site Name _____
Map Quad _____ T.O.L.N.A.
Map Quad _____
LTL ☐ Twp 150 R 060 Sec 19 QQQ 6 QQ 7 Q 6
LTL ☐ Twp _____ R _____ Sec _____ QQQ _____ QQ _____ Q _____
LTL ☐ Twp _____ R _____ Sec _____ QQQ _____ QQ _____ Q _____
LTL ☐ Twp _____ R _____ Sec _____ QQQ _____ QQ _____ Q _____
LTL ☐ Twp _____ R _____ Sec _____ QQQ _____ QQ _____ Q _____
LTL ☐ Twp _____ R _____ Sec _____ QQQ _____ QQ _____ Q _____

II. SITE DESCRIPTION

FEATURE TYPE	CULTURAL MATERIAL	<u>51</u> Site Type
<input type="checkbox"/> Cm Scatter	<input type="checkbox"/> Bone	<u>30</u> Context
<input type="checkbox"/> Chimney	<input type="checkbox"/> Ceramics	<u>88</u> Site Area
<input type="checkbox"/> Depression	<input type="checkbox"/> Charcoal	m. x m.
<input type="checkbox"/> Dump	<input type="checkbox"/> Cloth	<u> </u> Cultural Depth cm.
<input type="checkbox"/> Earthworks	<input type="checkbox"/> Faunal Remains	<input type="checkbox"/> Depth Indicator
<input type="checkbox"/> Fortification	<input type="checkbox"/> Fire Cracked Rock	Occupation Date
<input type="checkbox"/> Foundation	<input type="checkbox"/> Floral Remains	Begin _____ End _____
<input type="checkbox"/> Grave	<input type="checkbox"/> Glass	<u> </u> Basis For Dating
<input type="checkbox"/> Hearth	<input type="checkbox"/> Hide, Hair, Fur	<u> </u> Cm Density
<input type="checkbox"/> Machinery	<input type="checkbox"/> Human Remains	<input type="checkbox"/> Isolated Find
<input type="checkbox"/> Quarry/Mine	<input type="checkbox"/> Masonry	
<input type="checkbox"/> Rock Art	<input type="checkbox"/> Metal	
<input type="checkbox"/> Trail	<input type="checkbox"/> Plastic	
<input type="checkbox"/> Wreck	<input type="checkbox"/> Rubber	
<input type="checkbox"/> Other	<input type="checkbox"/> Shell	
	<input type="checkbox"/> Wood	
	<input type="checkbox"/> Other	

III. ENVIRONMENT

☐ Landform 1 5 Landform 2 9 Slope/Exposure 1 Ecosystem
☐ Landform 1 _____ Landform 2 _____ Slope/Exposure _____ Ecosystem
Elevation _____ Drainage System _____ View, _____ View, _____
41.4 m. S.H.E.Y.E.N.N.E. R.I.V.E.R Degree _____ Distance _____
Dist Perm Water 30 m. Perm Water Type 3 Dist Seas Water 30 m. Seas Water Type 4

IV. C.R.M.

3 Ownership _____ Ownership _____
1011318.6 Fieldwork Date _____ Fieldwork Date _____
☐ Site Condition 0 Collection 0 Test/Probe 0 Excavation
Additional Information 1 Management Recommendation

SHSND USE

☐ Soil Association ☐ Ecozone ☐ Area Signf _____ MS Number
☐ Soil Association ☐ Ecozone ☐ Area Signf _____ MS Number
☐ CR Type ☐ Verified Site ☐ Non-Site ☐ E C F ☐ T F
☐ State Registry ☐ National Register

Order

Date Coded

1.
2.
3.
4.
5.
6.
7.
8.
9.

1. Access From Devil's Lake, head east on Highway 2 to Lakota. Turn south on highway 1. Continue south about 18 miles. Turn west onto county road to Pekin. Follow road diagonally northwest through Pekin to the point where the road turns due west. Continue 0.75 miles to the first north-south intersecting road.
See continuation sheet
2. Description of Site The site is located on an alluvial terrace immediately above the Sheyenne River just east of the junction with Tolna Coulee. A two-track trail runs to the site from the county road on the east. The site is used today as a picnic/fishing area. Three circular hearth rings of modern origin are present along with discarded fishing gear, cigarette packages, pop cans, plastic plates, etc. A wooden plank crossing is present over Tolna Coulee at the mouth of the river. The site consists of a raised earthen berm about 75 cm high and roughly rectangular in outline 7 m x 11 m oriented 320° to 140° along the long axis. The earthen berm is depressed in the center about one meter deep. The berm is believed to be an earthen foundation. No evidence of any other foundation or building materials are present. Within the Sheyenne River just south of the site, cement blocks are present. It is doubtful they are associated with the earthen foundation as they are fairly recent. The foundation/depression is filled with brush and grassed over. (See continuation)
3. Description of Cultural Materials (Quantify and identify) Fishing lines and gear, pop and beer cans, plastic plates, cigarette packages, aluminum foil, etc. The hearth rings are filled with modern wood charcoal.

 # of items of cultural material observed 0 # Collected

4. Artifact Repository N/A.
5. Description of Subsurface Testing No subsurface testing was conducted at the site.

NDCRS ARCHEOLOGICAL AND HISTORICAL SITE FORMS

Field Code PE-86-DL-1

Descriptive Section

SITS Number 32NE36

Page 3

6. Current Use of Site Fishing/Picnic area and pasture.
7. Owner's Name/Address Evelyn, Owen and Judith Peterson, Tolna, North Dakota.
8. Vegetation Northern Floodplain Forest, brush understory and mixed short-medium grasses and forbs.
9. Cover (% of visible ground) 10 to 15%
10. Man-hours spent on site 1 hour
11. Project Title Devils Lake Flood Control Project
P.I. Mervin G. Floodman
12. Report Title _____
Author
13. Other Published References None
14. Description of Collections Observed None
15. Owner-Address of Collections Observed N/A
16. Statement of Integrity The site earthen foundation is well preserved. The outline and depression are clearly visible. As such the feature retains some integrity. The remaining areas of the site are impacted by modern activities.
17. Statement of Significance The site is not unique to the regional history. The site feature is intact but the site does not exhibit artifacts from the period of occupation. The site is impacted by modern picnic/fishing activities. The title research revealed no personages of historical importance. Thus the site is believed to be insignificant and of little potential for future research. The site is believed ineligible to the NRHP.
18. Comments/References _____

Recorded by Mervin G. FloodmanDate October 13, 1986

TOPO:

Photocopy, in 8½"x11" format, the portion of the 7.5' U.S.G.S. topographic quadrangle that shows the location of the site and surrounding area. Mark the boundaries of the site on the photocopy.

Attach the photocopy as a separate page of the Site Form following the Map & Photo Section.

SITE
PHOTOPhoto I.D. Code
B.W. ☐ Color ☐Storage Location

SKETCH MAP

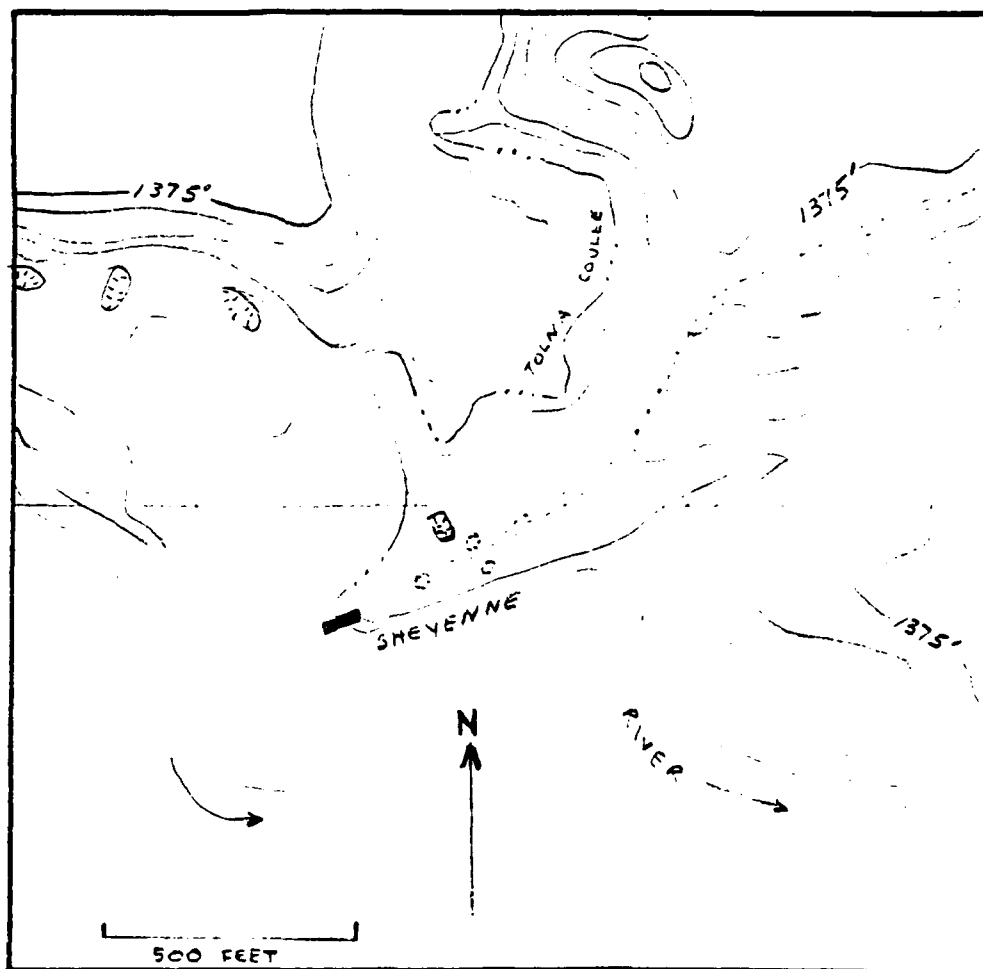
Sketch Map:

Include north arrow, individual numbered features, artifact loci, and road or street names.

Architectural sites: include roof ridge(s) and dimensions of site.

Map Key:

- ROAD / TRAIL
- ③ FEATURE BEAM / DEPRESSION
- HORIZONTAL HATCH RINGS
- MODERN BUILDING
- FENCE

Map Scale: 1 inch = 500 feetRecorded by Date

Item No.

1. Access: Turn south and proceed about 0.75 miles to an abandoned farm house on the east side of the road. Across from the drive way is a gate and a two-track trail. Follow this trail about 0.4 miles to the site above the Sheyenne River.

2. Description: It has not been utilized for a long period of time. The function of the earthen berm and its origins are unknown.

Deed and Title Search Documentation:

PE-86-DL-1 SE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 19, T.150N., R.60W.

Vol.	Page	Document #	Date	Conveyance	Location
10	9		4-25-1883	Gabriel L. Paulson, 160	N $\frac{1}{2}$ NE $\frac{1}{4}$ and S $\frac{1}{2}$ SE $\frac{1}{4}$
				acres, \$200.00, Received	
				Receipt #7173	
11	303		2-17-1985	Deed Record USA to G. Paulson	
				Certificate #7173.	
45	358	551	2-29-1896	Oliver Knudson Sheriff Nelson	N $\frac{1}{2}$ NE $\frac{1}{4}$, Sec. 30
				Co. to J. Lewis Brown,	S $\frac{1}{2}$ SE $\frac{1}{4}$, Sec. 19
				Indenture.	
106	1	25447	12-29-1905	Morris H. Kelley to heirs of	S $\frac{1}{2}$ SE $\frac{1}{4}$, Sec. 19
				M.H. Kelley.	
71	340	64777	9-3-1929	S.L. Brown, deceased, divided	
				between Elizabeth Brown, Lala	
				Brown and W.F. Mason	
156	192	65180	12-27-1929	Quit claim deed Elizabeth and	S $\frac{1}{2}$ SE $\frac{1}{4}$, Sec. 19
				Charles Brown to Lelia Brown.	
149	477	65192	1-29-1930	Estate S.L. Brown etc. defen-	
				dant to E.L. Voedisch, plain-	
				tiffs, found owned by plain-	
				tiffs and defendants.	
71	360	65236	2-30-1930	Estate Martha Kelley deceased	
				Margaret Kelley daughter vs	
				E. Voedisch, J. Kelley, M.	
				Voedisch and Fred Voedisch,	
Recorded by	Mervin G. Floodman	0.25 interest.	Date	October 13, 1986	

Deed and Title Search Documentation, Continued

Vol.	Page	Document #	Date	Conveyance	Location
180	69	68672	6-1933	L.E. Ouam et al. to Pekin Business Man's Club: Grant of Right for Construction of Dams on Sheyenne River.	(includes SE $\frac{1}{4}$, Sec. 19)
186	90	72677	3-12-1936	Lelia Brown to Paul F. Brown, Quit Claim Deed. One-half interest.	
186	119	72796	12-23-193	Paul F. Brown to Lloyd and Howard Peterson, quit claim deed. One-half interest.	S $\frac{1}{2}$ SE $\frac{1}{4}$ N $\frac{1}{2}$ NE $\frac{1}{4}$ Sec. 30
184	260	89310	12-14-1957	Lloyd Peterson to Howard Peterson	
186	1	89311	10-20-1955	Morris H. Kelley et al. to Howard Peterson, Judgement.	S $\frac{1}{2}$ SE $\frac{1}{4}$, Sec. 19 N $\frac{1}{2}$ NE $\frac{1}{4}$, Sec. 30
184	260	89317	10-22-55	Howard Peterson to Lloyd Peterson undivided one-half interest.	
192	508	96180	4-9-1963	Howard Peterson and Evelyn Peterson to Lloyd Peterson, one-half interest.	
192	509	96181	4-9-1963	Lloyd Peterson to Howard Peterson whole interest.	
196	572	68768	12-7-1964	Estate Howard Peterson to Evelyn, Owen and Judith Peterson.	SW $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 19 NW $\frac{1}{4}$ NE $\frac{1}{4}$, Sec. 30 S $\frac{1}{2}$ NW $\frac{1}{4}$, Sec. 30

Devils Lake Flood Control Project
SW¹SE⁴, Sec 19, T.150N., R.60W.
Nelson County, North Dakota



Site 32NE36 Looking West
Feature Depression Along Sheyenne River

Devils Lake Flood Control Project
SW 1/4 Sec 19, T.150N., R.60W.
Nelson County, North Dakota

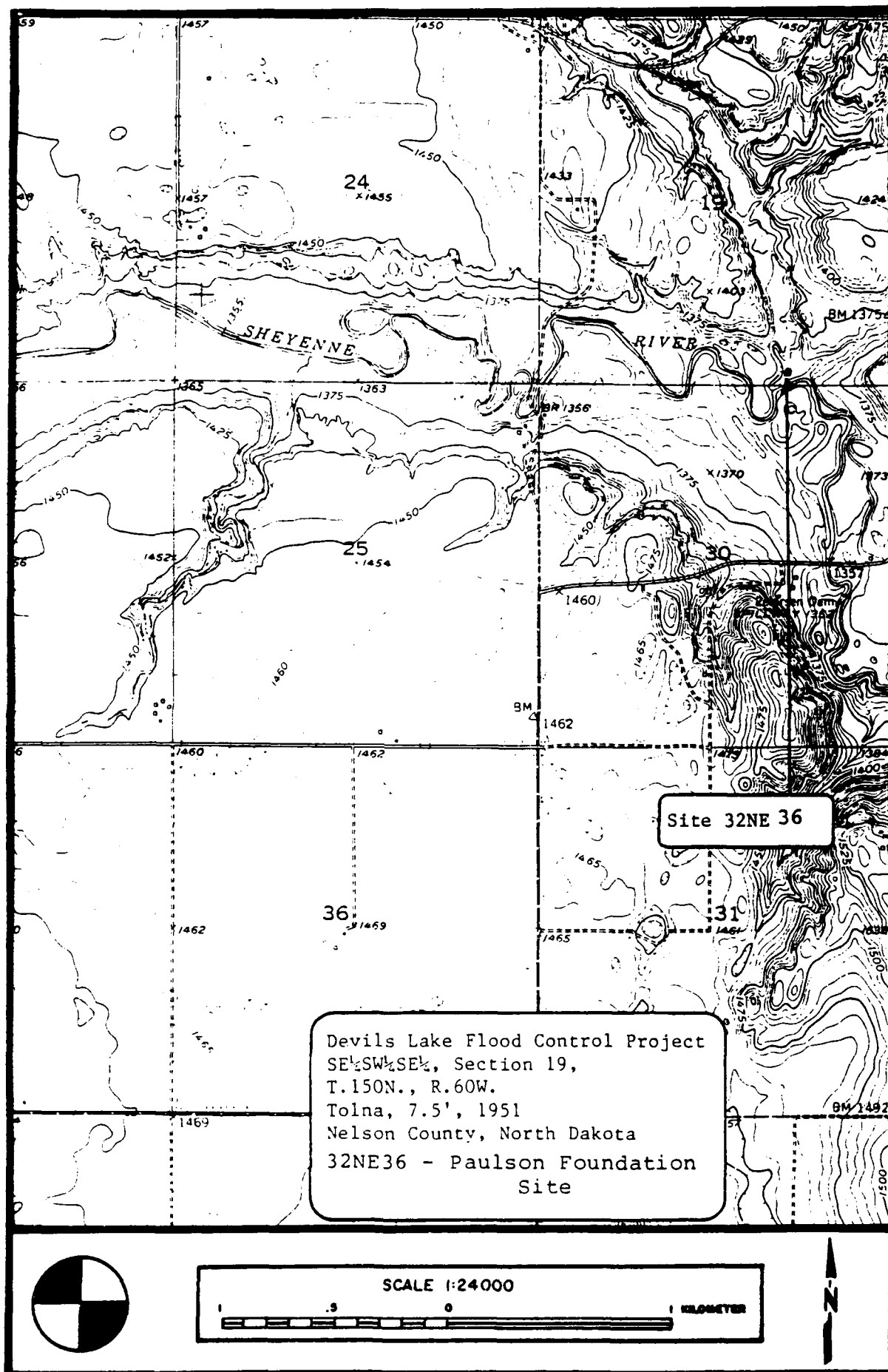


Site 32NE36 Looking West
Feature Depression Along Sheyenne River

Devils Lake Flood Control Project
SW¹SE⁴. Sec 19, T.150N., R.60W.
Nelson County, North Dakota



Site 32NE36 Looking West
Feature Depression Along Sheyenne River



NDCRS SITE FORM
 ARCHEOLOGICAL SITES

Page 1

1. N
2. E
3. S
4. W
5. NE
6. SE
7. SW
8. NW
9. C

I. SITE I.D.

SITS # 3.2 NE 3.7
 State County Site Number

Field Code P.E.8.6.D.L.2 Site Name _____
 Field Code _____ Site Name _____

Map Quad _____ T.O.L.N.A.
 Map Quad _____

LTL	Twp	<u>1.5.0</u>	R	<u>0.6.1</u>	Sec	<u>2.4</u>	QQQ	<u>1</u>	QQ	<u>8</u>	Q	<u>6</u>
LTL	Twp	<u>1.5.0</u>	R	<u>0.6.1</u>	Sec	<u>2.4</u>	QQQ	<u>4</u>	QQ	<u>5</u>	Q	<u>6</u>
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____

II. SITE DESCRIPTION

FEATURE TYPE	CULTURAL MATERIAL	m. x m.
<input type="checkbox"/> Conical Timber Lodge	<input type="checkbox"/> Bone	<u>1.5.8.5.0.0</u> Site Area
<input type="checkbox"/> CM Scatter	<input type="checkbox"/> Ceramics	<u>2.5</u> Cultural Depth cm.
<input type="checkbox"/> Earthlodge Village	<input type="checkbox"/> Charcoal	<u>2</u> Depth Indicator
<input type="checkbox"/> Earthworks	<input type="checkbox"/> Copper	
<input type="checkbox"/> Fortification	<input type="checkbox"/> Faunal Remains	CULTURAL/TEMPORAL
<input type="checkbox"/> Grave	<input type="checkbox"/> Fire Cracked Rock	AFFILIATION
<input type="checkbox"/> Hearth	<input type="checkbox"/> Floral Remains	=====
<input type="checkbox"/> Jump	<input type="checkbox"/> Fossil	<input type="checkbox"/> Paleo
<input type="checkbox"/> Mound	<input type="checkbox"/> Hide,Hair,Fur	<input type="checkbox"/> Archaic
<input type="checkbox"/> Other Rock Features	<input type="checkbox"/> Human Remains	<input type="checkbox"/> Late Prehistoric
<input type="checkbox"/> Pit	<input type="checkbox"/> Projectile Point	<input type="checkbox"/> Historic
<input type="checkbox"/> Quarry/Mine	<input type="checkbox"/> Shell	<u>1</u> Period Unknown
<input type="checkbox"/> Rock Art	<u>1</u> Stone, Chipped	
<input type="checkbox"/> Rock Shelter	<input type="checkbox"/> Stone, Ground	
<input type="checkbox"/> Stone Circle	<input type="checkbox"/> Trade Good	
<input type="checkbox"/> Trail	<input type="checkbox"/> Wood	
<input type="checkbox"/> Miscellaneous	<input type="checkbox"/> Other	
<input type="checkbox"/> Isolated Find	<u>5</u> CM Density	<u>1</u> Basis for Dating

III. ENVIRONMENT

1 Landform 1 0.9 Landform 2 1.0 Slope/Exposure 6 Ecosystem
☐ Landform 1 _____ Landform 2 _____ Slope/Exposure _____ Ecosystem

Elevation _____ Drainage System _____ View, Degree _____ View, Distance _____
44.1 m. _____ S.H.E.Y.E.N.N.E. R.I.V.E.R. 4 2

Dist Perm Water _____ Perm Water Type 3 Dist Seas Water 1.3.4.0 m. Seas Water Type 4

IV. C.R.M.

3 Ownership _____ Ownership _____
1.0.1.4.8.6 Fieldwork Date _____ Fieldwork Date _____
3 Site Condition 3 Collection 0 Test/Probe 0 Excavation
 Additional Information _____ 1 Management Recommendation _____

SHSND USE

_____ Soil Association _____ Ecozone _____ Area Signf _____ MS Number
 _____ Soil Association _____ Ecozone _____ Area Signf _____ MS Number
☐ CR Type ☐ Verified Site ☐ Non-Site _____ E C F ☐ T F
☐ State Registry ☐ National Register

Coder _____

Date Coded _____

NDCRS ARCHEOLOGICAL AND HISTORICAL SITE FORMS

Field Code PE-86-DL-2

Descriptive Section

SITS Number 32NE37

Page 2

1. Access From Devils Lake, head east on Highway 2 to Lakota. Turn south on highway 1. Continue south about 18 miles, turn west on county road to Pekin. Continue through Pekin on diagonal road toward the northwest. As this road turns due west, continue about 1.75 miles. As the road straightens after bend to south, (see continuation sheet)
2. Description of Site The site is located along the edge of the bluffs overlooking the Sheyenne River valley to the south. The site is located in a cultivated field, a dense stand of unharvested sunflowers at the time of the survey. The site consists of a relatively sparse scatter of lithic cultural materials with occasional denser concentrations. Most of the material appears to be found on the eastern end with residual scatter to the west. Visibility was poor due to sunflower cover. The extent of the site was difficult to ascertain. The site is believed to be continuous although wide areas were encountered with no artifacts. The two large bifaces were found on the west end of the site within 30 cm of each other. Several other flakes in the area as well. The soils are dark brown very sandy loams over outwash gravels. The soils are shallow and poorly developed. Rodent holes and cuts along the south quarried edge of the site appear no deeper than 25 cm. The extensive amounts of gravel and sand in the (see continuation sheet)
3. Description of Cultural Materials (Quantify and identify) Collected: two large biface/blanks of coarse chert, one smaller biface fragment coarse chert, and one Knife River flint scraper. Uncollected: artifacts are predominantly chert. Most are coarse grained to fine grained white chert. Also some red and tan chert. Yellow and red quartzite flakes and numerous decortication flakes and cores. One petrified wood flake was observed. Noticeably absent is Knife River flint, only one artifact was observed and collected. Most materials are cores, decortication flakes and interior flakes. (see continuation)
- 45 # of items of cultural material observed 4 # Collected

4. Artifact Repository _____

5. Description of Subsurface Testing No subsurface testing was conducted.Recorded by Mervin G. FloodmanDate October 14, 1986

NDCRS ARCHEOLOGICAL AND HISTORICAL SITE FORMS

Field Code PE-86-DL-2

Descriptive Section

SITS Number 32NE37

Page 3

6. Current Use of Site Cultivated fields, currently sunflower.
7. Owner's Name/Address Formerly Tracy and Margy Henningsgard, currently owned by Community Credit Union as of 12-31-86.
8. Vegetation Vegetation was dense, unharvested sunflower plants with dense short-grasses along the south field margin.
9. Cover (% of visible ground) 50 to 60%.
10. Man-hours spent on site 3 hours.
11. Project Title Devils Lake Flood Control Project.
P.I. Mervin G. Floodman
12. Report Title _____
Author _____
13. Other Published References None.
14. Description of Collections Observed None.
15. Owner-Address of Collections Observed N/A
16. Statement of Integrity The site appears to be lacking in integrity due to modern cultivation. Only shallow soil zones overlie the sterile outwash gravels. This zone is almost entirely destroyed by the cultivation zone. The potential for buried materials is poor.
17. Statement of Significance Given the lack of integrity and poor potential for significant, intact cultural deposits, the site is not believed to be significant or potentially eligible for the NRHP. No further work is recommended.
18. Comments/References The site will not be effected by the proposed COE channelization plans.

Recorded by Mervin G. FloodmanDate October 14, 1986

TOPO:

Photocopy, in 8½"x11" format,
the portion of the 7.5' U.S.G.S.
topographic quadrangle that
shows the location of the site
and surrounding area. Mark the
boundaries of the site on the
photocopy.

SEE ATTACHED

Attach the photocopy as a
separate page of the Site
Form following the Map &
Photo Section.

B.W. ☐ Color ☐

Photo I.D. Code _____

Storage Location _____

SKETCH MAP

Sketch Map:

Include north arrow,
individual numbered
features, artifact
loci, and road or
street names.

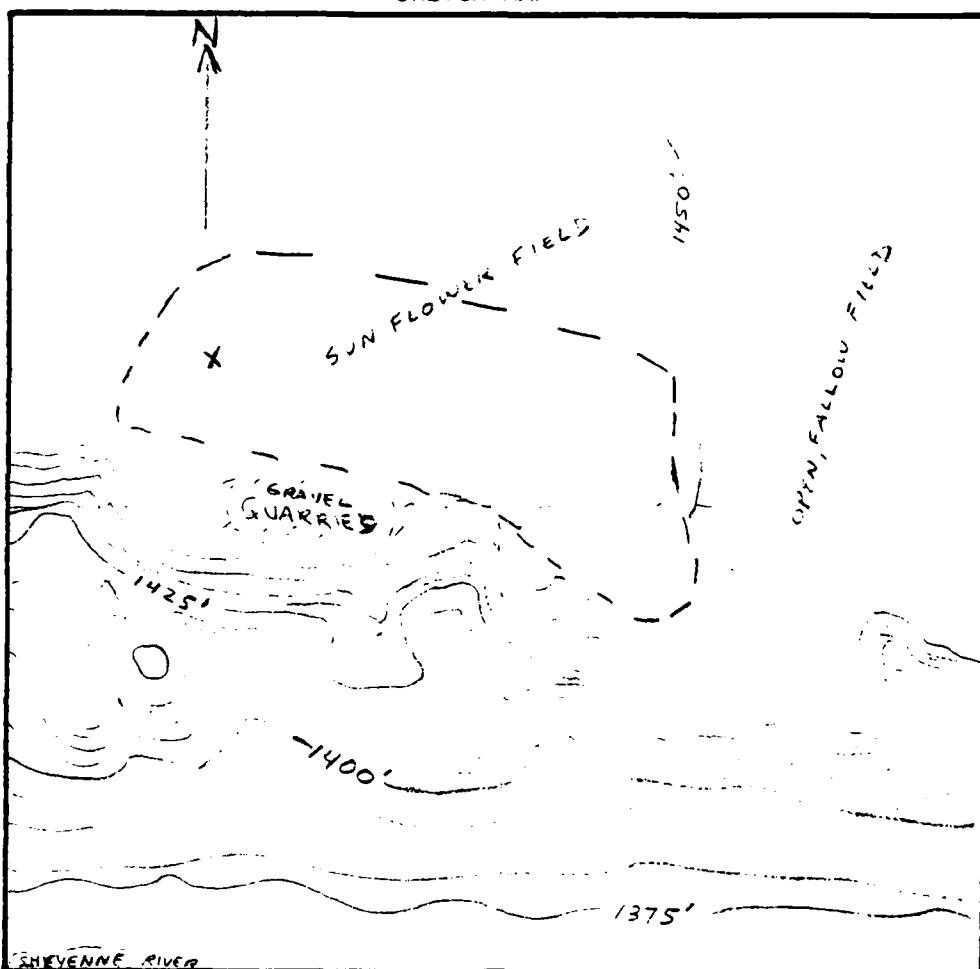
Architectural sites:
include roof ridge(s)
and dimensions of
site.

Map Key:

— SITE AREA
X 3 PILES

500 FEET
(APPROXIMATE)

Map Scale: 1:50,000
1000 FEET



Recorded by _____

Date April 19 1966

Continuation Form

Site Number 32NE37

Item No.

1. Access: ...turn off paved road to the south on gravelled driveway. Continue south on unimproved dirt trail past farmhouse to the west. Follow this dirt trail about 0.70 miles to the edge of Sheyenne River valley. The site lies in a field on the hill crest due west about 240 meters.

2. Description of Site: ...soil plowzone suggests the site is probably destroyed by the cultivation. The potention of buried cultural materials at the site is minimal.

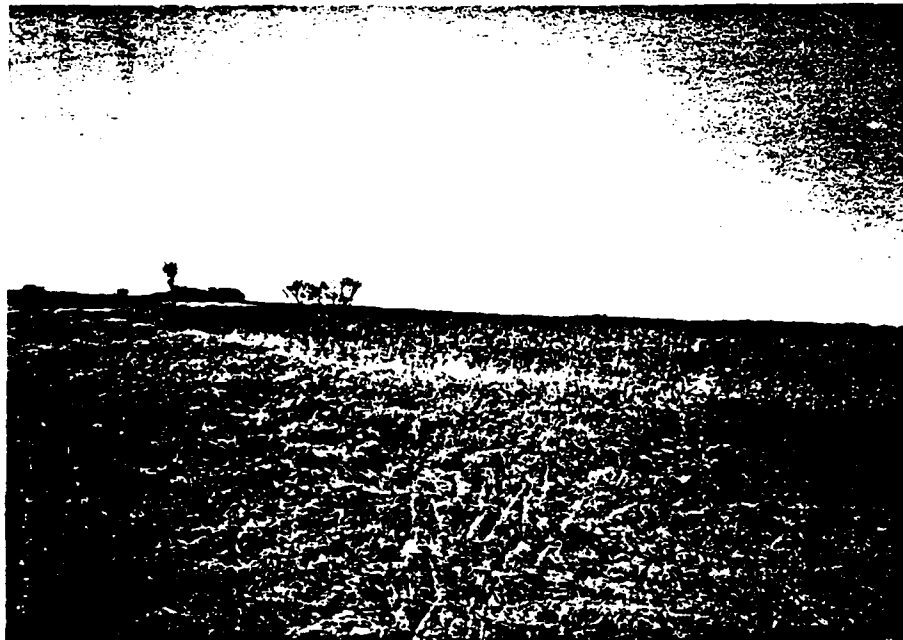
3. Description of Cultural Materials: Few tool fragments or finished tools were noted. No diagnostics were recovered.

Recorded by Mervin G. FloodmanDate October 14, 1986

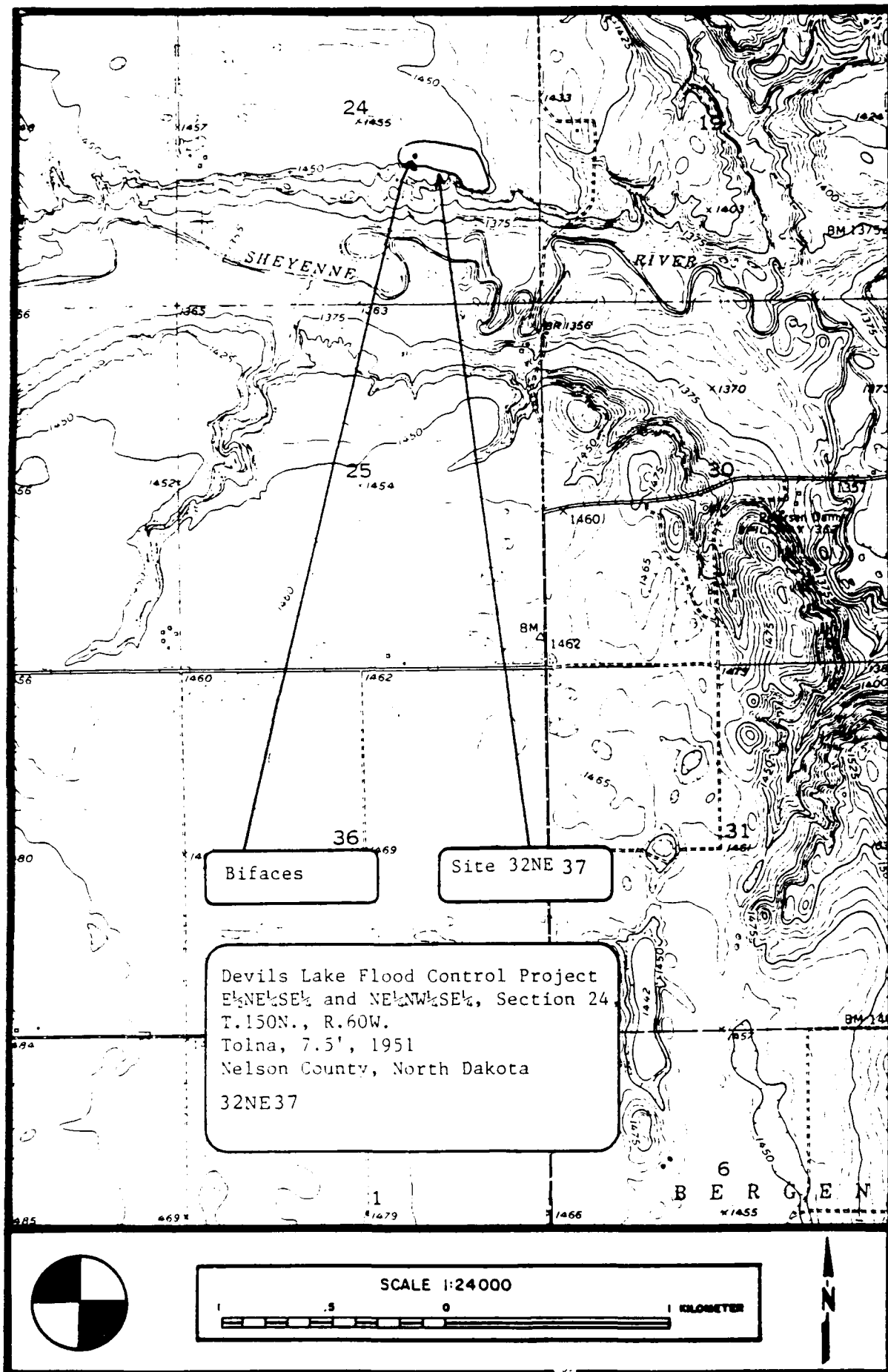
32NE37

page 6

Devils Lake Flood Control Project
T2N, S8E, NE, NW, SE, Section 2,
T150N, R101W,
Nelson County, North Dakota



Site 32NE 37, view toward the west-northwest.



NDCRS SITE FORM
ARCHEOLOGICAL SITES

Page 1

SITS # 32 NE 38
State County Site Number

Field Code P.E.8.6.D.L1.5 Site Name _____
Field Code _____ Site Name _____

Map Quad _____ P.E.K.I.N. N.W.
Map Quad _____

LTL	Twp	<u>152</u>	R	<u>061</u>	Sec	<u>27</u>	QQQ	<u>18</u>	QQ	<u>7</u>	Q	<u>6</u>
LTL	Twp	<u>152</u>	R	<u>061</u>	Sec	<u>27</u>	QQQ	<u>5</u>	QQ	<u>6</u>	Q	<u>7</u>
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____

1. N
2. E
3. S
4. W
5. NE
6. SE
7. SW
8. NW
9. C

FEATURE TYPE

- ☐ Conical Timber Lodge
- ☒ CM Scatter
- ☐ Earthlodge Village
- ☐ Earthworks
- ☐ Fortification
- ☐ Grave
- ☐ Hearth
- ☐ Jump
- ☐ Mound
- ☐ Other Rock Features
- ☐ Pit
- ☐ Quarry/Mine
- ☐ Rock Art
- ☐ Rock Shelter
- ☐ Stone Circle
- ☐ Trail
- ☐ Miscellaneous
- ☐ Isolated Find

CULTURAL MATERIAL

- ☐ Bone
- ☐ Ceramics
- ☐ Charcoal
- ☐ Copper
- ☐ Faunal Remains
- ☐ Fire Cracked Rock
- ☐ Floral Remains
- ☐ Fossil
- ☐ Hide, Hair, Fur
- ☐ Human Remains
- ☐ Projectile Point
- ☐ Shell
- ☒ Stone, Chipped
- ☐ Stone, Ground
- ☐ Trade Good
- ☐ Wood
- ☐ Other

27 30 m. x m. Site Area
20 Cultural Depth cm
4 Depth Indicator

CULTURAL/TEMPORAL
AFFILIATION

- =====
- ☐ Paleo
 - ☐ Archaic
 - ☐ Late Prehistoric
 - ☐ Historic
 - ☒ Period Unknown

1 CM Density 1 Basis for Dating

1 Landform 1 09 Landform 2 10 Slope/Exposure 7 Ecosystem

1 Landform 1 _____ Landform 2 _____ Slope/Exposure _____ Ecosystem

Elevation _____ Drainage System _____ View, Degree _____ View, Distance _____
451 m. _____ D.E.V.I.L.S. L.A.K.E. 4 3

Dist Perm Water _____ Perm Water Type 1 Dist Seas Water _____ Seas Water Type 4
400 m. _____ 610 m.

3 Ownership _____ Ownership

10125186 Fieldwork Date _____ Fieldwork Date

☒ Site Condition ☐ Collection ☒ Test/Probe ☒ Excavation

Additional Information _____ Management Recommendation _____

_____ Soil Association _____ Ecozone _____ Area Signf _____ MS Number

_____ Soil Association _____ Ecozone _____ Area Signf _____ MS Number

☐ CR Type ☐ Verified Site ☐ Non-Site ☐ E C F ☐ T F

☐ State Registry ☐ National Register

Coder _____ Date Coded _____

I. SITE I.D.

II. SITE DESCRIPTION

III. ENVIRONMENT

IV. C.R.M.

SHSD USE

NDCRS ARCHEOLOGICAL AND HISTORICAL SITE FORMS

Field Code PE-86-DL-15

Descriptive Section

SITS Number 32NE38

Page 2

1. Access From Devils Lake, head east on highway 23. Continue east to turn off for Bartlett. Turn south on to county road. Follow this road 1.0 miles south, 0.25 miles west and four miles due south. At this point the road jogs southwest past Swan lake. Continue for 1.0 miles after the road straightens due south. (see continuation sheet)

2. Description of Site The site consists of a very sparse scatter of lithic materials located on a hilltop overlooking the outwash channel to the north. The site is located just southeast of the highest crest of the hill. The site is in a plowed and harvested wheat field at the time of the survey. Most of the site was in dense stubble and weeds with limited visibility. The site produced a very limited amount of cultural materials.

3. Description of Cultural Materials (Quantify and identify) _____

One retouched coarse chert flake.

Two tertiary flakes fine-grained white chert.

One shatter flake fine-grained white chert.

4 # of items of cultural material observed

0 # Collected

4. Artifact Repository _____

5. Description of Subsurface Testing No subsurface testing was conducted at the site area.

Recorded by Mervin G. Floodman

Date 10-25-86

6. Current Use of Site Cultivated wheatfield.
7. Owner's Name/Address Delmar and Rita Martin, Tolna, North Dakota.
8. Vegetation Dense grasses, weeds and stubble at the time of the survey.
9. Cover (% of visible ground) 20 to 30%.
10. Man-hours spent on site 1 hour.
11. Project Title Devils Lake Flood Control Project.
P.I. Mervin G. Floodman
12. Report Title _____
Author _____
13. Other Published References None.
14. Description of Collections Observed None.
15. Owner-Address of Collections Observed N/A.
16. Statement of Integrity The site area is disturbed by modern, deep cultivation zones. The site soils are shallow glacial loams. The potential for substantial, intact buried deposits is believed to be minimal. The cultivation may have destroyed the cultural zones.
17. Statement of Significance The site has been impacted by modern cultivation and may have destroyed the site deposits. The potential for significant buried deposits is small. No diagnostics and a very small number of artifacts were observed. It is not believed future research at this site would have the potential to add significantly to regional prehistory. The site is not believed to be eligible to the NRHP.
18. Comments/References _____

TOPO:

SEE ATTACHED

Photocopy, in 8½"x11" format,
the portion of the 7.5' U.S.G.S.
topographic quadrangle that
shows the location of the site
and surrounding area. Mark the
boundaries of the site on the
photocopy.

Attach the photocopy as a
separate page of the Site
Form following the Map &
Photo Section.

B.W. ☐ Color ☐

Photo I.D. Code _____

Storage Location _____

SKETCH MAP

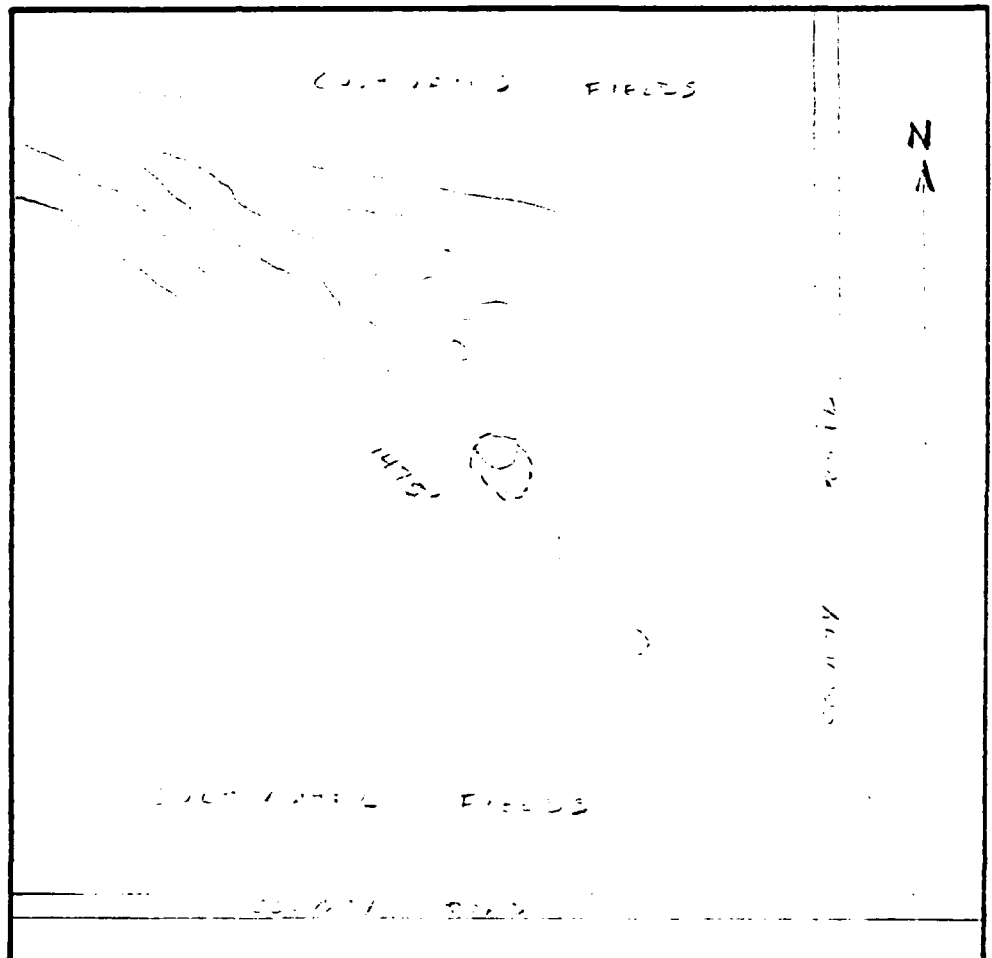
Sketch Map:

Include north arrow,
individual numbered
features, artifact
loci, and road or
street names.

Architectural sites:
include roof ridge(s)
and dimensions of
site.

Map Key.

○ AREA
--- BOUNDARIES



Map Scale:

Recorded by Jim GoodmanDate 10/25/86

Continuation Form

Site Number 32NE38

Item No.

1. Access: The site lies in the cultivated field west of the roadway. Follow the crest of the hill west, angling northwesterly about 450 m to the site area.

Recorded by Mervin G. FloodmanDate 10-25-86

Devils Lake Flood Control Project
NW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$, Section 27, T.152N., R.61W.
Nelson County, North Dakota
32NE38
page 6

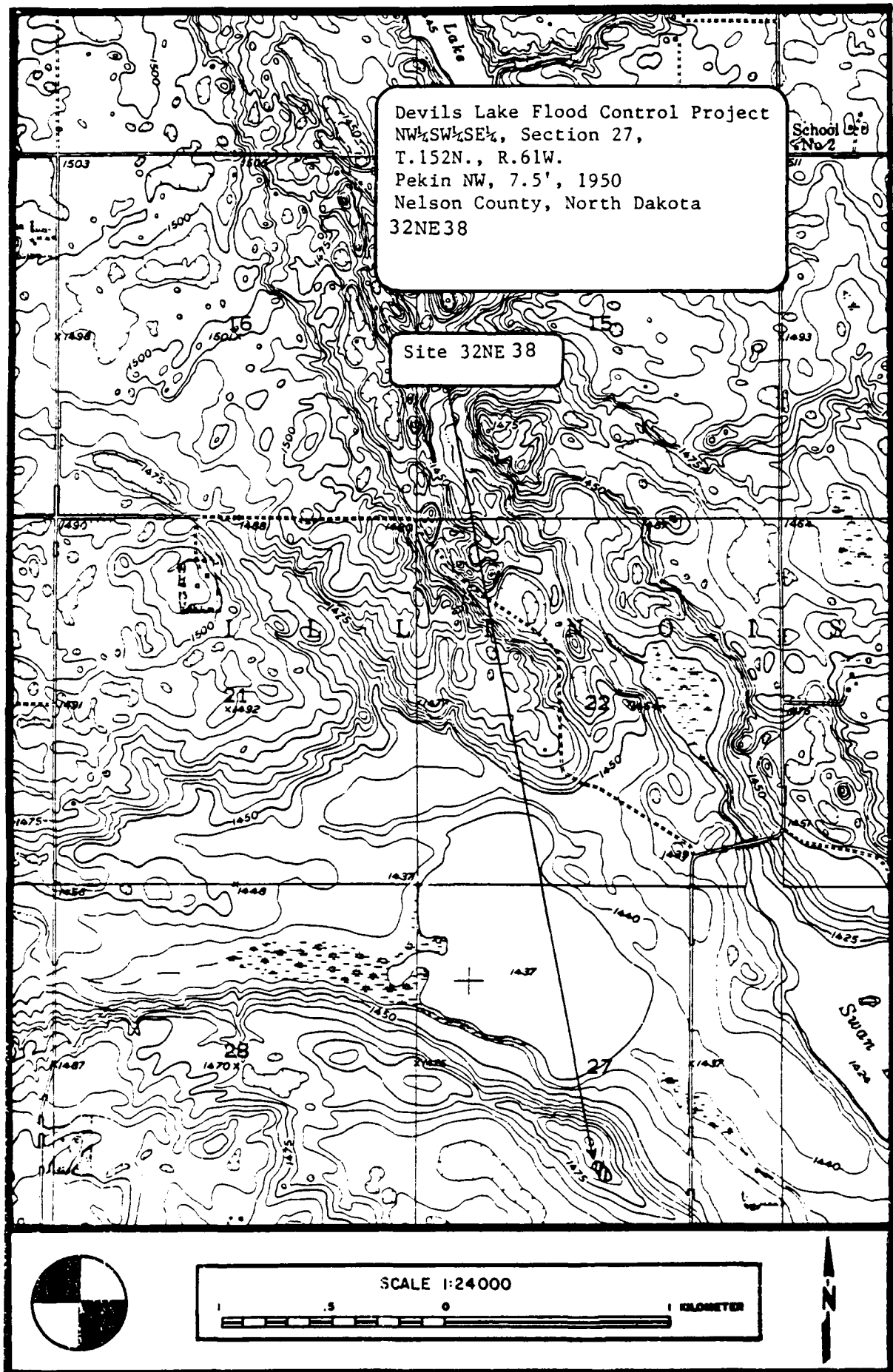


Overview toward the east.

Devils Lake Flood Control Project
NW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$, Section 27,
T.152N., R.61W.
Pekin NW, 7.5', 1950
Nelson County, North Dakota
32NE38

School 28
No. 2

Site 32NE 38



Page 1

L. SITE I.D.

III. SITE DESCRIPTION

III. ENVIRONMENT

IV. C.R.M.

SHSND USE

1. N
2. E
3. S
4. W
5. N
6. S
7. S
8. N
9. C

1. Access From Devils Lake, head east on Highway 2 to Lakota. Turn south on Highway 1 and continue about 18 miles. Turn west onto county road to Pekin. Go through Pekin and continue northwest on diagonal road. As it turns due west, continue four miles. Turn north and proceed four miles (passing through Tolna). (see continuation sheet)
2. Description of Site The site consists of a former homestead which is shown clearly on the Tolna topographic quadrangle. The site is located on the open plain along the south side of East Stump Lake. The site lies on a terminal moraine just south of the former glacial beach of Stump Lake. The flat lacustrine bed to the north is under cultivation. The homestead and all structures have been torn down or removed. The foundations have been bulldozed into the low, treed swale northwest of the former location of the structures. No integrity remains to the materials in the dump area. Northwest, across the open fields are a collection of abandoned machinery and cars. A Desota, Dodge, Ford cars are present along with Minneapolis Moline tractor, combines, etc. Currently, a wooden frame grainary or storage building is being moved onto the site and a windbreak of wooden fencing is being constructed. These materials are being built at the time of the survey and are not part of the original site. (see continuation sheet)
3. Description of Cultural Materials (Quantify and identify) The cars in the northwest corner are Ford, Dodge and Desoto and of no great age, 1950-1960s. The Minneapolis Moline tractor and equipment are of unknown age. The material scatter in the bulldozed dump area is dense and includes cement foundations, wooden siding, shingles, glass, metal, ceramics, plastics, rubber, etc.

 # of items of cultural material observed 0 # Collected

4. Artifact Repository N/A.

5. Description of Subsurface Testing No subsurface testing was conducted at the site.

Recorded by Mervin G. Floodman Date October 14, 1986

6. Current Use of Site Cultivation and grainary or storage shed.
7. Owner's Name/Address Grace Schmidt, Tolna, ND.
8. Vegetation Surrounding fields are of wheat. Low swale is tree lined with dense short medium grasses and understory.
9. Cover (% of visible ground) 50 to 80%.
10. Man-hours spent on site 1 hour.
11. Project Title Devils Lake Flood Control Project.
P.I. Mervin G. Floodman
12. Report Title _____
Author _____
13. Other Published References None.
14. Description of Collections Observed None.
15. Owner-Address of Collections Observed N/A.
16. Statement of Integrity The integrity of the original homestead and farm structures is completely destroyed. None of the original structures or foundations remain intact, all are burnt or bulldozed into the low swale.
17. Statement of Significance The site is entirely lacking in integrity. As such, the site offers little or no research, potential. The site is not able to add significant information to regional history. As such, it is ineligible for the NRHP.
18. Comments/References _____

SEE ATTACHED

Attach the photocopy as a separate page of the Site Form following the Map & Photo Section.

Photo I.D. Code

Storage Location _____

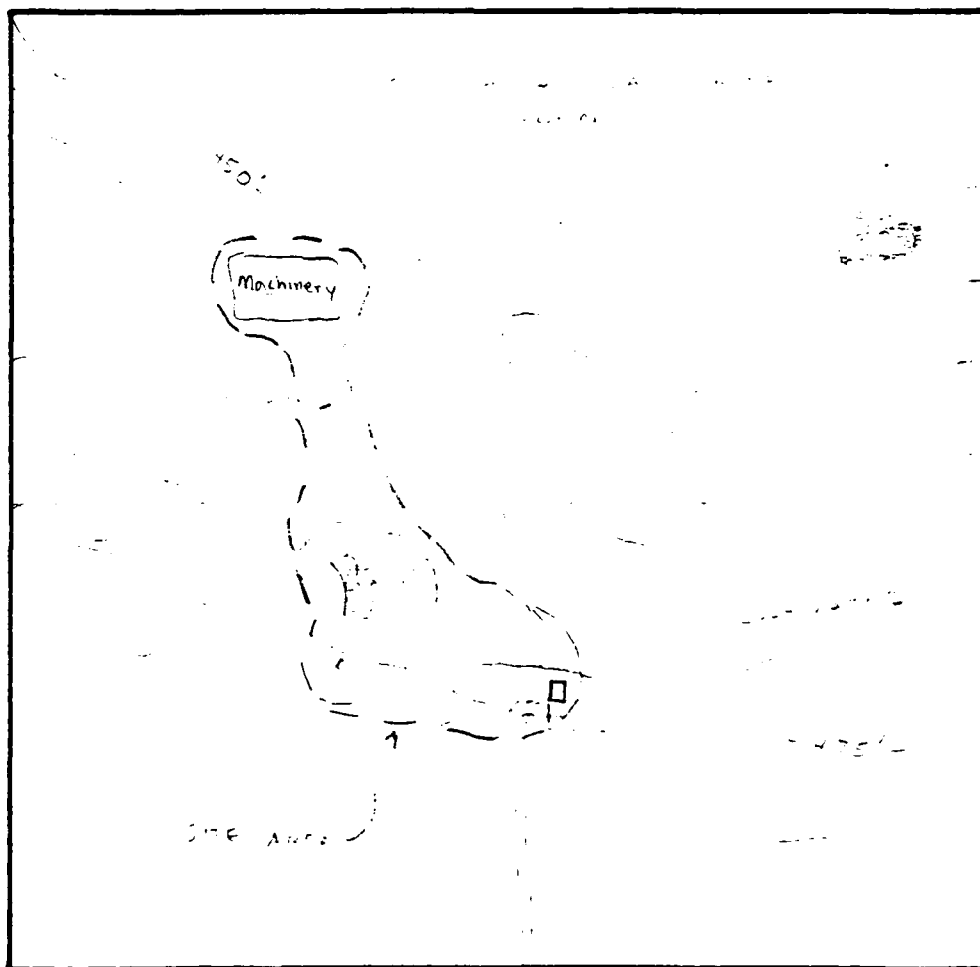
SKETCH MAP

Architectural sites:
include roof ridge(s)
and dimensions of
site.

= 1000000 / 1000000
 = 1000000



Map Scale: 1:50,000



Date _____

Continuation Form

Site Number 32NE39

Item No.

1. Access: Turn West on county road and proceed about 0.4 miles to the first drive to the north. Take this drive 0.25 miles north to the site area.

2. Description of Site: The low swale contains lots of cultural scatter and foundation and board materials. The site is being cultivated and all trace of the site is gone, except for occasional materials in the field. Electrical power poles and a well are still intact at the site. All else is burnt or torn down and removed.

Deed and Title Search Documentation:

PE-86-DL-3 SW $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 27, T.151N., R.61W.

Vol.	Page	Document #	Date	Conveyance	Location
36	467	33919	2-12-1903	Homestead Certificate #6658, Application 15371, Gottlieb Schmid.	N $\frac{1}{4}$ SW $\frac{1}{4}$
174	592	82636	6-30-1948	Estate Gottlieb Schmid to Fred Schmid et al.	
179	440	84880	4-7-1951	Oil & Gas lease, Schmid to R.V. Hodge.	
183	216	85982	4-9-1951	Assignment oil & gas lease to W.L. Griffith.	4-9-1951
186	380	91080	11-15-1957	Order establishing Irrigation District.	
186	496	91650	6-27-1958	Release of oil & gas lease W.L. Griffith to Schmid.	
186	612	92018	11-18-1958	Severance Agreement Fred Schmidt to Commodity Credit Corp.	
193	172	95859	11-27-1962	Commodity Credit Corp. to Fred Schmidt. Discharge of Severance Agreement.	
196	102	97355	2-28-1962	Telephone right-of-way easement.	
204	489		5-31-1968	Fred Schmidt to Texana Oil Company, oil & gas lease.	
206	535	105271	12-29-1969	Estate Fred Schmidt to Grace Schmidt et al.	

Recorded by Mervin G. FloodmanDate October 14, 1986

32NE39

Deed and Title Search Documentation, Continued
page 6

Vol.	Page	Document #	Date	Conveyance	Location
100	579	105673	6-15-1970	Roland Schmidt to Grace Schmidt Quit Claim Deed.	
100	579	105674	6-15-1970	Warren G. Schmidt to Grace Schmidt Quit Claim Deed.	
107	99	105706	6-1-1970	Release oil & gas lease, Texana Oil Company.	
122	333			Oil & gas lease.	

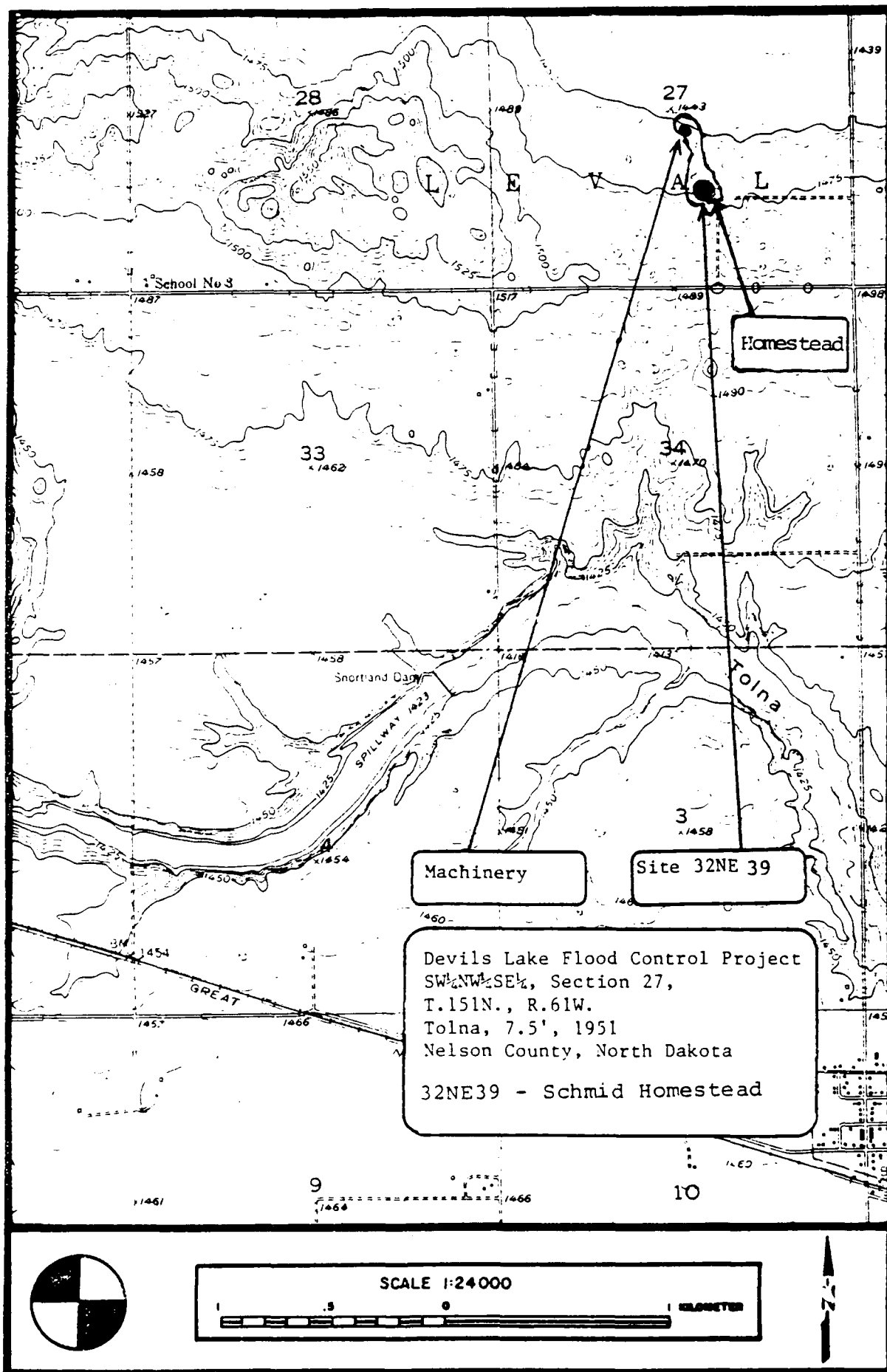
Griff's Lake Flood Control Project
W. 1/4 Sec. 27, T.151N., R.61W.
Ward County, North Dakota
page 7



Site 32NE39 , machinery, car area, over-
view toward the northwest.



Site 32NE 39, view toward the northeast.



NDCRS SITE FORM
HISTORICAL ARCHEOLOGICAL SITES

Page 1

I. SITE I.D.

SITS # 3.2 R.Y. 10
State County Site Number
Field Code P.E.8.6.D.1.1.6 Site Name Taylor Potato Cellar
Field Code _____ Site Name _____
Map Quad S.W.E.E.T.W.A.T.E.R.
Map Quad _____
LTL 0 Twp 1.5.5 R 0.6.4 Sec 3.6 QQQ 6 QQ 6 Q 8
LTL _____ Twp _____ R _____ Sec _____ QQQ _____ QQ _____ Q _____
LTL _____ Twp _____ R _____ Sec _____ QQQ _____ QQ _____ Q _____
LTL _____ Twp _____ R _____ Sec _____ QQQ _____ QQ _____ Q _____
LTL _____ Twp _____ R _____ Sec _____ QQQ _____ QQ _____ Q _____
LTL _____ Twp _____ R _____ Sec _____ QQQ _____ QQ _____ Q _____

1. N
2. E
3. S
4. W
5. NE
6. SE
7. SW
8. NW
9. C

II. SITE DESCRIPTION

FEATURE TYPE	CULTURAL MATERIAL	<u>6.1</u> Site Type
<input type="checkbox"/> Cm Scatter	<input type="checkbox"/> Bone	<u>1.3</u> Context
<input type="checkbox"/> Chimney	<input type="checkbox"/> Ceramics	<u>8.7.5</u> Site Area
<input checked="" type="checkbox"/> Depression	<input type="checkbox"/> Charcoal	m. x m.
<input type="checkbox"/> Dump	<input type="checkbox"/> Cloth	<u>1.5.0</u> Cultural Depth cm.
<input type="checkbox"/> Earthworks	<input type="checkbox"/> Faunal Remains	<u>2</u> Depth Indicator
<input type="checkbox"/> Fortification	<input type="checkbox"/> Fire Cracked Rock	Occupation Date
<input type="checkbox"/> Foundation	<input type="checkbox"/> Floral Remains	Begin _____ End <u>1.9.3.5</u>
<input type="checkbox"/> Grave	<input type="checkbox"/> Glass	Basis For Dating
<input type="checkbox"/> Hearth	<input type="checkbox"/> Hide, Hair, Fur	<u>1.1</u>
<input type="checkbox"/> Machinery	<input type="checkbox"/> Human Remains	<u>3</u> Cm Density
<input type="checkbox"/> Quarry/Mine	<input type="checkbox"/> Masonry	<u>0</u> Isolated Find
<input type="checkbox"/> Rock Art	<input checked="" type="checkbox"/> Metal	
<input type="checkbox"/> Trail	<input type="checkbox"/> Plastic	
<input type="checkbox"/> Wreck	<input type="checkbox"/> Rubber	
<input type="checkbox"/> Other	<input type="checkbox"/> Shell	
	<input checked="" type="checkbox"/> Wood	
	<input checked="" type="checkbox"/> Other	

III. ENVIRONMENT

2 Landform 1 0.9 Landform 2 1.0 Slope/Exposure _____ Ecosystem _____
☐ Landform 1 _____ Landform 2 _____ Slope/Exposure _____ Ecosystem _____
Elevation _____ Drainage System _____ View, Degree _____ View, Distance _____
1.3.6 m. _____ D.E.V.I.L.S. L.A.K.E 2 4
Dist Perm Water _____ Perm Water Type 1 Dist Seas Water 2.2.8 m. Seas Water Type 1

IV. C.R.M.

3 Ownership _____ Ownership _____
1.0.2.9.8.6 Fieldwork Date _____ Fieldwork Date _____
1 Site Condition 0 Collection 0 Test/Probe 0 Excavation
Additional Information _____ Management Recommendation 1

SHSND USE

_____ Soil Association _____ Ecozone _____ Area Signf _____ MS Number
_____ Soil Association _____ Ecozone _____ Area Signf _____ MS Number
☐ CR Type ☐ Verified Site ☐ Non-Site ☐ E C F ☐ T F
☐ State Registry ☐ National Register

Coder

Date Coder

1. Access From Devils Lake, North Dakota, proceed north on highway 20 a distance of 6.1 miles, thence right (east) approximately 0.75 miles, thence north and easterly approximately 1.25 miles to McCarthy farm, thence easterly approximately 0.5 miles to the site.

2. Description of Site The site consists of an elongated, board-filled depression, with a surrounding scatter of boards. The depression is approximately 3.0 by 12 meters, with the long axis oriented north. Observable depth of the depression is at least 1 meter plus. The boards are of various standard dimensions, e.g. 2 x 4, 2 x 6, 1 x 8, etc. The boards contain round nails. Boards are scattered several meters out from the edges of the depression.

The site is located at the bottom of a low, tree-covered knoll, approximately 12 m east of an old lake-shoreline. A trail road passes within some 10 to 15 m north of the site.

The landowner stated that the depression was originally a potato cellar, which has since been used as a dump. He stated it is about 50 years old.

3. Description of Cultural Materials (Quantify and identify) Used dimension lumber (several pickup loads) with round nails. Also several buckets, a section of drain trough, a fragment of horse collar, and a burned-out coal/wood heating stove.

Material filling the depression has been hauled in and dumped. It is unrelated to the depression's original function (potato cellar).

 # of items of cultural material observed 0 # Collected

4. Artifact Repository N/A.

5. Description of Subsurface Testing None.

NOOKS ARCHEOLOGICAL AND HISTORICAL SITE FORMS

Field Code PE-86-DL-16

Descriptive Section

Page 3

SITS Number 32BY10

6. Current Use of Site Dump site.
7. Owner's Name/Address Jack McCarthy, Devils Lake, North Dakota.
8. Vegetation Various native grasses and forbs; deciduous trees, some 60 m north-east of the site.
9. Cover (% of visible ground) 15 to 25%.
10. Man-hours spent on site 1 hour.
11. Project Title Devils Lake Flood Control Project
P.I. Mervin G. Floodman
12. Report Title _____
Author _____
13. Other Published References None.
14. Description of Collections Observed None.
15. Owner-Address of Collections Observed _____
16. Statement of Integrity The site has virtually no integrity, in as much as the original feature (potato cellar) either caved-in or was deliberately destroyed. The site's integrity has been further disturbed by using it as a dumping ground for discarded lumber.
17. Statement of Significance The site does not appear to be significant, since it is neither well-preserved nor unique in nature. Because of its poor integrity, it is not a good example of this type of feature (potato storage cellar). It does not have apparent potential to contribute additional significant data.
18. Comments/References _____

Recorded by James M. Brechtel

Date 10-29-86

TOPO:

Photocopy, in 8½"x11" format,
the portion of the 7.5' U.S.G.S.
topographic quadrangle that
shows the location of the site
and surrounding area. Mark the
boundaries of the site on the
photocopy.

SEE ATTACHED

Map and Photo

Attach the photocopy as a
separate page of the Site
Form following the Map &
Photo Section.

B.W. ☒ Color ☐Photo I.D. Code PE11C-1PE11C-1Storage Location PE11C-1

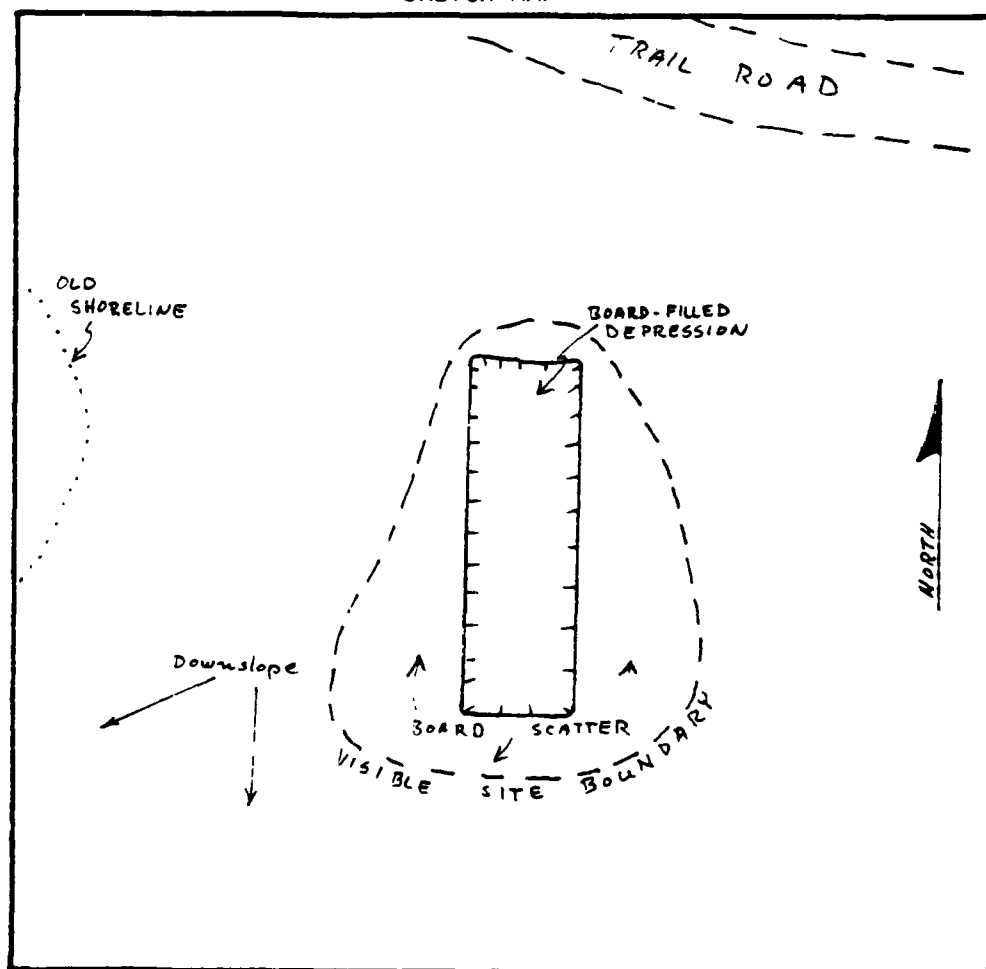
SKETCH MAP

Sketch Map:

Include north arrow,
individual numbered
features, artifact
loci, and road or
street names.

Architectural sites:
include roofridge(s)
and dimensions of
site.

Map Key:

Map Scale: 3 MetersRecorded by J. P. 1-1Date 11-1-88

NORTH DAKOTA CULTURAL RESOURCES SURVEY

Page 5

Continuation Form

Site Number 32RY10

[illegible]

Devils Lake Flood Control Project
SE 1/4 NW 1/4, Section 36, T.155N., R.64W.,
Ramsey County, North Dakota

32RY10

page 6



Overview toward the south. (JB8612-0.)
32RY10



Overview toward the south. (JB8612-1.)
32RY10

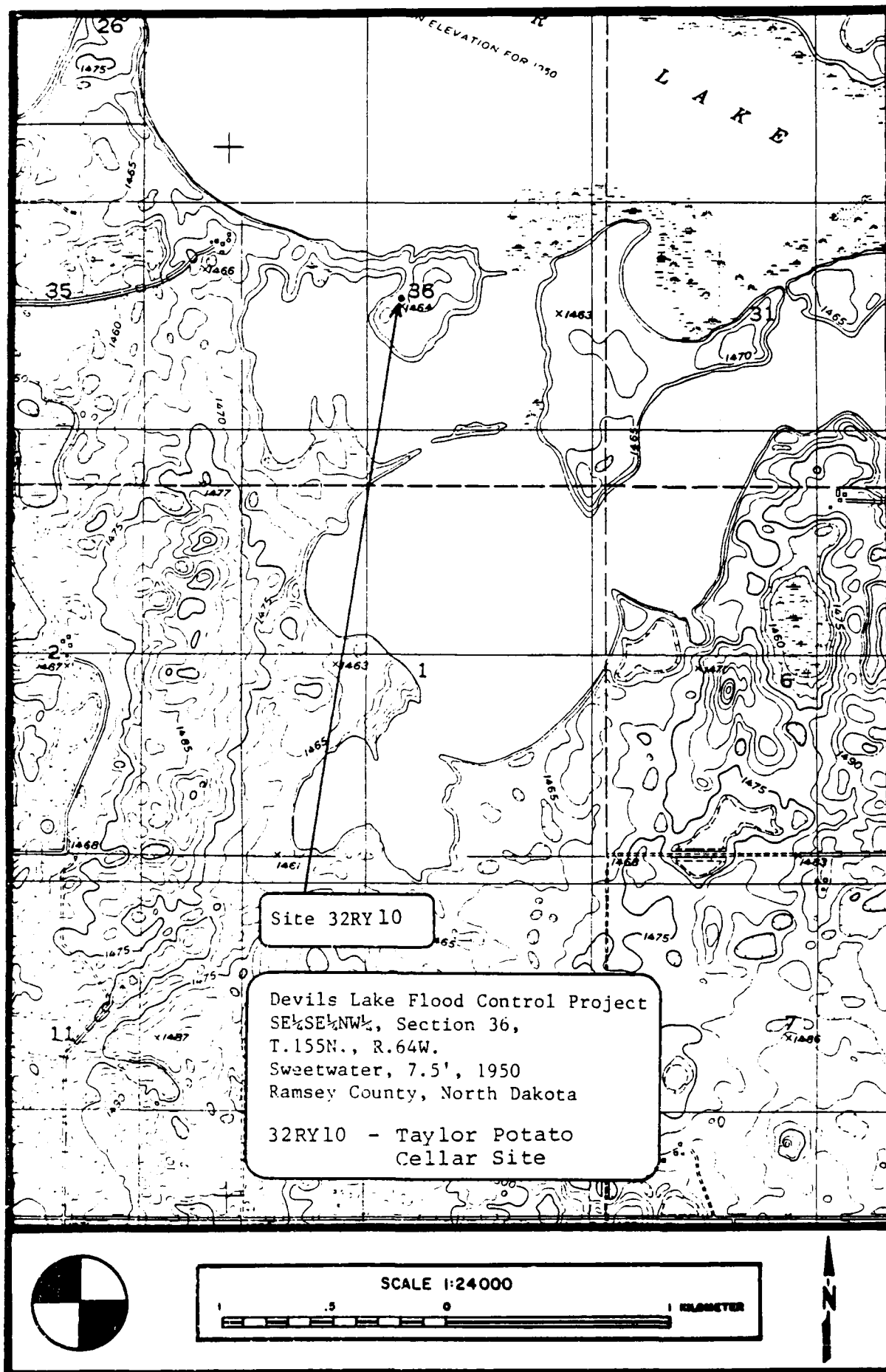
Devils Lake Flood Control Project
SP, S12 NW, Section 36, T.155N., R.64W.
Ramsey County, North Dakota

32RY10
page 7



Overview toward the north. (JB8612-2.)

32RY10



NDCRS SITE FORM
 ARCHEOLOGICAL SITES

Page 1

1. N $\frac{1}{2}$
2. E $\frac{1}{2}$
3. S $\frac{1}{2}$
4. W $\frac{1}{2}$
5. NE $\frac{1}{4}$
6. SE $\frac{1}{4}$
7. SW $\frac{1}{4}$
8. NW $\frac{1}{4}$
9. C

SITS # 3.2 R.Y. 1.1
 State County Site Number
 Field Code PE 8.6 D.L. 2.0 Site Name _____
 Field Code _____ Site Name _____

Map Quad _____ S.W.E.T.W.A.T.E.R
 Map Quad _____

LTL <input type="checkbox"/> Twp <u>1 5 5</u>	R <u>0 6 3</u>	Sec <u>3 1</u>	QQQ <u>6</u>	QQ <u>6</u>	Q <u>5</u>
LTL <input type="checkbox"/> Twp _____	R _____	Sec _____	QQQ _____	QQ _____	Q _____
LTL <input type="checkbox"/> Twp _____	R _____	Sec _____	QQQ _____	QQ _____	Q _____
LTL <input type="checkbox"/> Twp _____	R _____	Sec _____	QQQ _____	QQ _____	Q _____
LTL <input type="checkbox"/> Twp _____	R _____	Sec _____	QQQ _____	QQ _____	Q _____
LTL <input type="checkbox"/> Twp _____	R _____	Sec _____	QQQ _____	QQ _____	Q _____

FEATURE TYPE	CULTURAL MATERIAL	<u>4^m x 7^m</u> Site Area
<input type="checkbox"/> Conical Timber Lodge	<input type="checkbox"/> Bone	<u> </u> Cultural Depth <u>cm.</u>
<input checked="" type="checkbox"/> CM Scatter	<input checked="" type="checkbox"/> Ceramics	<input type="checkbox"/> Depth Indicator
<input type="checkbox"/> Earthlodge Village	<input type="checkbox"/> Charcoal	
<input type="checkbox"/> Earthworks	<input type="checkbox"/> Copper	
<input type="checkbox"/> Fortification	<input checked="" type="checkbox"/> Faunal Remains	CULTURAL/TEMPORAL
<input type="checkbox"/> Grave	<input checked="" type="checkbox"/> Fire Cracked Rock	AFFILIATION
<input type="checkbox"/> Hearth	<input type="checkbox"/> Floral Remains	=====
<input type="checkbox"/> Jump	<input type="checkbox"/> Fossil	<input type="checkbox"/> Paleo
<input type="checkbox"/> Mound	<input type="checkbox"/> Hide, Hair, Fur	<input type="checkbox"/> Archaic
<input type="checkbox"/> Other Rock Features	<input type="checkbox"/> Human Remains	<input checked="" type="checkbox"/> Late Prehistoric
<input type="checkbox"/> Pit	<input checked="" type="checkbox"/> Projectile Point	<input type="checkbox"/> Historic
<input type="checkbox"/> Quarry/Mine	<input type="checkbox"/> Shell	<input type="checkbox"/> Period Unknown
<input type="checkbox"/> Rock Art	<input checked="" type="checkbox"/> Stone, Chipped	
<input type="checkbox"/> Rock Shelter	<input type="checkbox"/> Stone, Ground	
<input type="checkbox"/> Stone Circle	<input type="checkbox"/> Trade Good	
<input type="checkbox"/> Trail	<input type="checkbox"/> Wood	
<input type="checkbox"/> Miscellaneous	<input type="checkbox"/> Other	
<input type="checkbox"/> Isolated Find	<input checked="" type="checkbox"/> CM Density	<u>3</u> Basis for Dating

<input checked="" type="checkbox"/> Landform 1 <u>1 5</u>	Landform 2 <u>1 0</u>	Slope/Exposure <u>1 8</u>	Ecosystem <u> </u>
<input type="checkbox"/> Landform 1 _____	Landform 2 _____	Slope/Exposure _____	Ecosystem _____
Elevation <u>4.5 0</u> m.	Drainage System <u>D.E.V.I.L.S. L.A.K.E.</u>	View, Degree <u>4</u>	View, Distance <u>2</u>
Dist Perm Water <u>6.0</u> m.	Perm Water Type <u>1</u>	Dist Seas Water _____ m.	Seas Water Type _____

<u>3</u> Ownership	<input type="checkbox"/> Ownership
<u>0.5</u> <u>2.1</u> <u>8.7</u> Fieldwork Date	_____ Fieldwork Date
<u>5</u> Site Condition	<u>2</u> Collection
<u>0</u> Test/Probe	<u>0</u> Excavation
Additional Information _____	<u>4</u> Management Recommendation

<input type="checkbox"/> Soil Association	<input type="checkbox"/> Ecozone	<input type="checkbox"/> Area Signf	_____ MS Number
<input type="checkbox"/> Soil Association	<input type="checkbox"/> Ecozone	<input type="checkbox"/> Area Signf	_____ MS Number
<input type="checkbox"/> CR Type	<input type="checkbox"/> Verified Site	<input type="checkbox"/> Non-Site	<input type="checkbox"/> E C F <input type="checkbox"/> T F
<input type="checkbox"/> State Registry	<input type="checkbox"/> National Register		

Coder _____

Date Coded _____

I. SITE I.D.

II. SITE DESCRIPTION

III. ENVIRONMENT

IV. C.R.M.

SHSND USE

1. Access From Devils Lake, take Highway 20 about 2.5 miles north, then turn east on a county road. Proceed 3.5 miles and turn north on a county road; continue 2.5 miles. The site lies on high terrace on west side of the road adjacent to the fenceline by the abandoned homestead (temp. Site #19).
2. Description of Site The site is located in a cultivated field on a terrace above the east edge of Sweetwater Lake. It is a prehistoric cultural material scatter consisting of lithics, ceramics, cracked rock and fragmented faunal remains. The site extends some 67 meters north to south by 62 meters east to west, along the field adjacent to the fenceline on the west. The materials are widely scattered and no real concentrations were observed. Deep soil zones in the area were noted and there is the potential for intact stratified deposits to exist. The site is assigned to the Blackduck culture of the Late Woodland period based on the recovery of an unnotched projectile point and a ceramic sherd. The sherd appears similar to Figure 10 in Anfinson (1979:32). In Minnesota the Blackduck culture has been dated from ca. A.D. 800 to 1400.
3. Description of Cultural Materials (Quantify and identify) Collected: 1 white chert unnotched triangular projectile point
1 KRF endscraper
1 Rim or neck sherd grit temper combed
Uncollected: 20 flakes KRF and chert (see continuation page for complete listing)

23 # of items of cultural material observed . 3 # Collected
4. Artifact Repository State History Society of North Dakota, Bismarck
5. Description of Subsurface Testing No subsurface testing was conducted

6. Current Use of Site Small grain cultivation
7. Owner's Name/Address William P. and Jack McCarthy
8. Vegetation Field had just been seeded when surveyed and no vegetation of any kind was present.
9. Cover (% of visible ground) 100%
10. Man-hours spent on site 2 hours
11. Project Title Devils Lake Flood Control Project
P.I. Mervin Floodman
12. Report Title _____
Author Mervin Floodman
13. Other Published References None
14. Description of Collections Observed None
15. Owner-Address of Collections Observed N/A
16. Statement of Integrity The site surface has been disturbed by modern cultivation. Deep soils were observed in the area. The potential exists for intact or stratified cultural deposits lying undisturbed beneath the plow zone.
17. Statement of Significance The significance of the site is undetermined, pending subsurface testing to assess the nature and extent of the cultural deposits below the plow zone.
18. Comments/References Anfinson, Scott Editor
1979 A Handbook of Minnesota Prehistoric Ceramics.
Occasional Publications in Minnesota Anthropology
No. 5. Minnesota Archaeological Society, St. Paul.

TOPO:

Photocopy, in 8½"x11" format, the portion of the 7.5' U.S.G.S. topographic quadrangle that shows the location of the site and surrounding area. Mark the boundaries of the site on the photocopy.

SEE ATTACHED

Attach the photocopy as a separate page of the Site Form following the Map & Photo Section.

B.W. ☐ Color ☐

Photo I.D. Code _____

Storage Location _____

SKETCH MAP

Sketch Map:

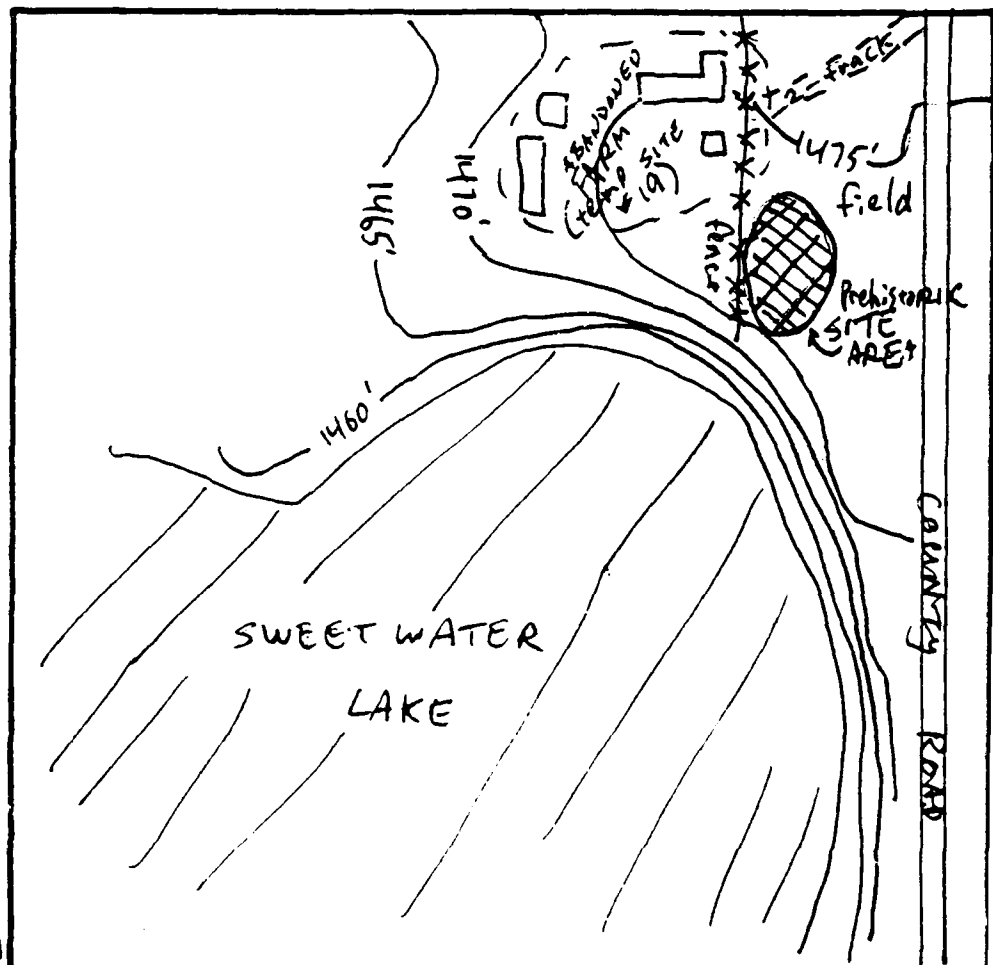
Include north arrow, individual numbered features, artifact loci, and road or street names.

Architectural sites: include roof ridge(s) and dimensions of site.

Map Key:



Map Scale: M
0 50 100

Recorded by M. FloodmanDate 5/21/87

Continuation Form

Site Number 32RV11

Item No.

Item #3 (continued)

Site Materials:

- | | |
|------|---------------------------------------|
| 1 | core whitish grey chert |
| 2 | small white chert biface fragment |
| 3 | tertiary flake KRF |
| 4 | tertiary flake tan-white chert |
| 5 | utilized flake KRF |
| 6 | flake white chert |
| 7 | large white chert tertiary flake |
| 8 | large white chert flake |
| 9 | tertiary flake shatter KRF |
| 10 | large utilized secondary flake KRF |
| 11 | tertiary flake white chert |
| X 12 | unnotched triangular projectile point |
| 13 | utilized flake KRF |
| 14 | small tertiary flake KRF |
| 15 | tertiary white chert flake |
| 16 | KRF shatter flake |
| X 17 | Rim sherd |
| 18 | white chert core fragment |
| 19 | secondary flake white chert |
| 20 | secondary flake KRF |
| 21 | flake white chert |
| 22 | large tertiary flake KRF |
| X 23 | endscraper KRF |

X = Collected

Recorded by M. Floodman

Date May 21, 1987

Devils Lake Project
SE4NE4, Sec. 31, T.155N., R.63W.
Ramsey County, North Dakota

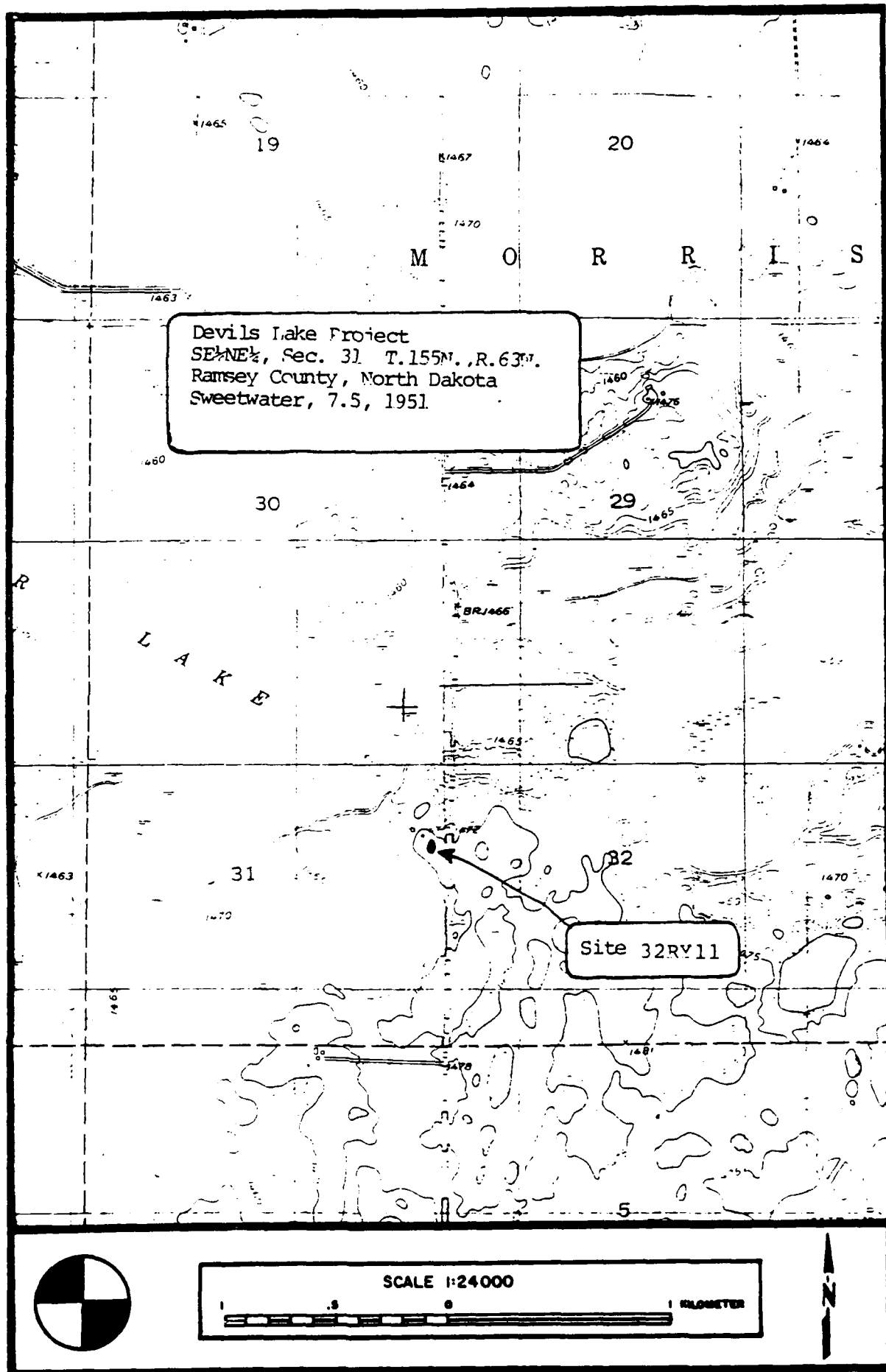
32RY11
p.6



Site Looking South



Site Looking Southwest



NDCRS SITE FORM
 ARCHEOLOGICAL SITES

Page 1

SITS # 3.2 R.Y. 1.2
 State County Site Number

Field Code P.E.8.6.D.1.2.1 Site Name _____
 Field Code _____ Site Name _____

Map Quad _____ C.A.N.D.O.S.E
 Map Quad _____

LTL	Twp	<u>1.5.6</u>	R	<u>0.6.5</u>	Sec	<u>1.8</u>	QQQ	<u>18</u>	QQ	<u>5</u>	Q	<u>6</u>
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____

1. N $\frac{1}{2}$
2. E $\frac{1}{2}$
3. S $\frac{1}{2}$
4. W $\frac{1}{2}$
5. NE $\frac{1}{4}$
6. SE $\frac{1}{4}$
7. SW $\frac{1}{4}$
8. NW $\frac{1}{4}$
9. C

FEATURE TYPE	CULTURAL MATERIAL	m. x m.	Site Area
<input type="checkbox"/> Conical Timber Lodge	<input type="checkbox"/> Bone	<u>1.8</u>	<u>2</u>
<input type="checkbox"/> CM Scatter	<input type="checkbox"/> Ceramics	_____	Cultural Depth cm
<input type="checkbox"/> Earthlodge Village	<input type="checkbox"/> Charcoal	_____	Depth Indicator
<input type="checkbox"/> Earthworks	<input type="checkbox"/> Copper		
<input type="checkbox"/> Fortification	<input type="checkbox"/> Faunal Remains	CULTURAL/TEMPORAL	
<input type="checkbox"/> Grave	<input type="checkbox"/> Fire Cracked Rock	AFFILIATION	
<input type="checkbox"/> Hearth	<input type="checkbox"/> Floral Remains	=====	
<input type="checkbox"/> Jump	<input type="checkbox"/> Fossil	<input type="checkbox"/> Paleo	
<input checked="" type="checkbox"/> Mound	<input type="checkbox"/> Hide, Hair, Fur	<input type="checkbox"/> Archaic	
<input type="checkbox"/> Other Rock Features	<input type="checkbox"/> Human Remains	<input checked="" type="checkbox"/> Late Prehistoric	
<input type="checkbox"/> Pit	<input type="checkbox"/> Projectile Point	<input type="checkbox"/> Historic	
<input type="checkbox"/> Quarry/Mine	<input type="checkbox"/> Shell	<input type="checkbox"/> Period Unknown	
<input type="checkbox"/> Rock Art	<input type="checkbox"/> Stone, Chipped		
<input type="checkbox"/> Rock Shelter	<input type="checkbox"/> Stone, Ground		
<input type="checkbox"/> Stone Circle	<input type="checkbox"/> Trade Good		
<input type="checkbox"/> Trail	<input type="checkbox"/> Wood		
<input type="checkbox"/> Miscellaneous	<input type="checkbox"/> Other		
<input type="checkbox"/> Isolated Find	<u>0</u> CM Density	<u>8</u> Basis for Dating	

<input checked="" type="checkbox"/> Landform 1	<u>0.9</u>	Landform 2	<u>1.0</u>	Slope/Exposure	<u>1.8</u>	Ecosystem
<input type="checkbox"/> Landform 1	_____	Landform 2	_____	Slope/Exposure	_____	Ecosystem
Elevation	_____	Drainage System	_____	View, Degree	_____	View, Distance
<u>4.4.6</u> m.	_____	<u>D.E.V.I.L.S. L.A.K.E.</u>	_____	<u>4</u>	_____	<u>2</u>
Dist Perm Water	<u>6.0</u> m.	Perm Water Type	<u>1</u>	Dist Seas Water	_____ m.	Seas Water Type
_____	_____	_____	_____	_____	_____	_____

<u>3</u> Ownership	<input type="checkbox"/> Ownership
<u>0.5.12.2.18.7</u> Fieldwork Date	_____ Fieldwork Date
<u>4</u> Site Condition	<u>0</u> Collection
<u>0</u> Test/Probe	<u>0</u> Excavation
Additional Information	<u>4</u> Management Recommendation

_____ Soil Association	_____ Ecozone	<input type="checkbox"/> Area Signf	_____ MS Number
_____ Soil Association	_____ Ecozone	<input type="checkbox"/> Area Signf	_____ MS Number
<input type="checkbox"/> CR Type	<input type="checkbox"/> Verified Site	<input type="checkbox"/> Non-Site	<input type="checkbox"/> E C F <input type="checkbox"/> T F
<input type="checkbox"/> State Registry	<input type="checkbox"/> National Register		

Coder _____ Date Coded _____

I. SITE I.D.

II. SITE DESCRIPTION

III. ENVIRONMENT

IV. C.R.M.

SHSD USE

1. Access From Devils Lake, take Highway 2 to Grand Harbor. Continue one mile west and turn north on the county road. Proceed north ca. 10.5 miles and then turn west on county road and continue two miles (beyond the Chain Lake Church). Turn north on the County road and continue for 1/2 mile. Site lies to the west across the field above the lake.
2. Description of Site The site is located on a small, isolated hill on the eastern edge of Chain Lake. The hill with the feature is the only such rise visible in the area and is the highest point at over 1465. ' It appears to be on the second strandline or bench above the modern lake. The site consists of a single conical mound. The mound is badly disturbed, probably from previous pot-hunting activity and also ravaged by badgers. The area is heavily burrowed and disturbed. No cultural materials or bone were observed in the disturbed areas. The mound is about 13X14 meters in diameter. When first observed, it was believed to be natural; but on closer study, it was recorded as cultural in origin. The site is probably related to an undesignated woodland cultural group and may be a burial mound.

3. Description of Cultural Materials (Quantify and identify) No cultural materials or bone were observed on the site area despite the extensive disturbance

0 # of items of cultural material observed 0 # Collected

4. Artifact Repository N/A

5. Description of Subsurface Testing No subsurface testing was conducted.

Recorded by Mervin Floodman

Date 5/22/87

NDCKS ARCHEOLOGICAL AND HISTORICAL SITE FORMS

Field Code PF-86-DL-21

Descriptive Section

SITS Number 32RY12

Page 3

6. Current Use of Site Pasturage adjacent to cultivated field
7. Owner's Name/Address Joel and Donna Starsteen
8. Vegetation Mixed short grasses, buckbrush, forbs, shrubs, etc.
Appears to be mown and baled occasionally.
9. Cover (% of visible ground) 10%
10. Man-hours spent on site 1 hour
11. Project Title Devils Lake Flood Control Project
P.I. Mervin Floodman
12. Report Title _____
Author Mervin Floodman
13. Other Published References None
14. Description of Collections Observed None
15. Owner-Address of Collections Observed N/A
16. Statement of Integrity The integrity of the mound is highly disturbed. It is depressed in the center, probably as the result of previous excavation. It has also been impacted by badger and rodent burrowing activity.
17. Statement of Significance The site is of undetermined significance, pending a subsurface testing program to see the extent and nature of its buried remains. Its integrity is suspect due to past impacts of pot-hunting and animal disturbances.
18. Comments/References _____

Recorded by Mervin FloodmanDate 5/22/87

TOPO:

Photocopy, in 8 1/2"x11" format, the portion of the 7.5' U.S.G.S. topographic quadrangle that shows the location of the site and surrounding area. Mark the boundaries of the site on the photocopy.

SEE ATTACHED

Attach the photocopy as a separate page of the Site Form following the Map & Photo Section.

B.W. ☐ Color ☐

Photo I.D. Code _____

Storage Location _____

SKETCH MAP

Sketch Map:

Include north arrow, individual numbered features, artifact loci, and road or street names.

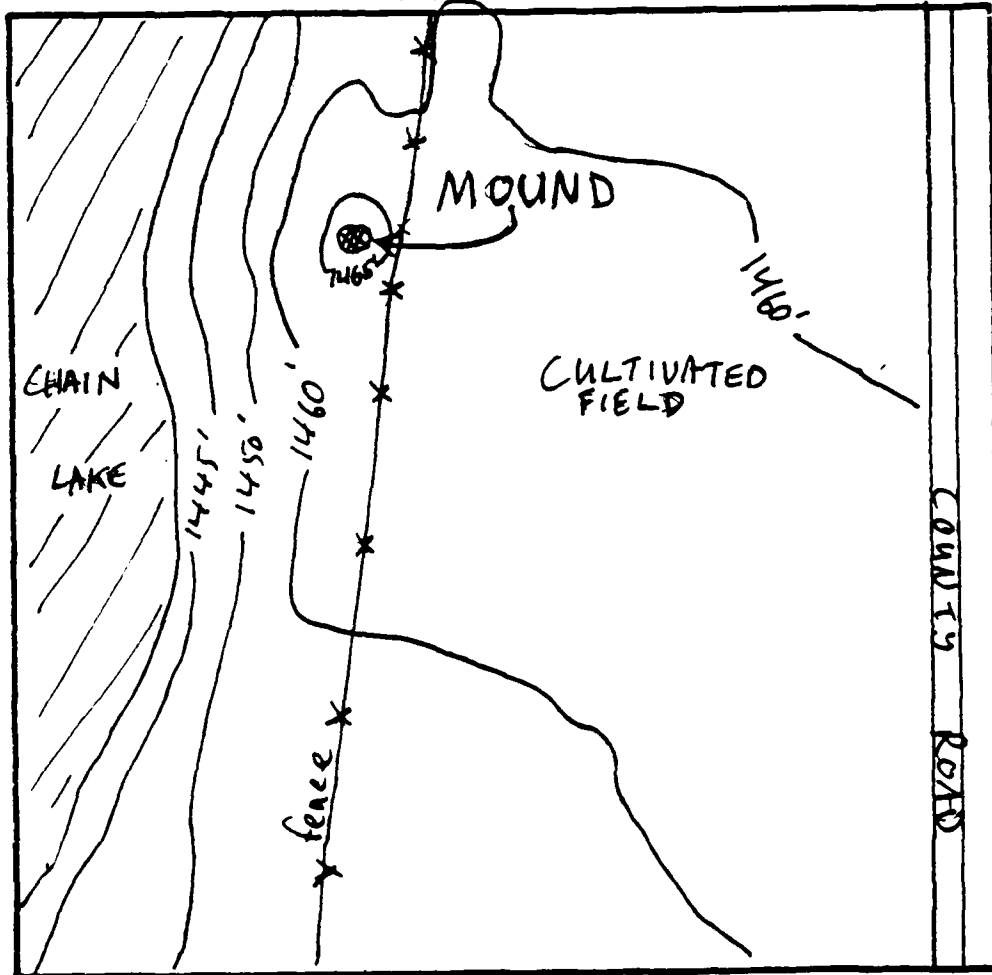
Architectural sites: include roof ridge(s) and dimensions of site.

Map Key:



0 15 30 45 60
METERS

Map Scale:

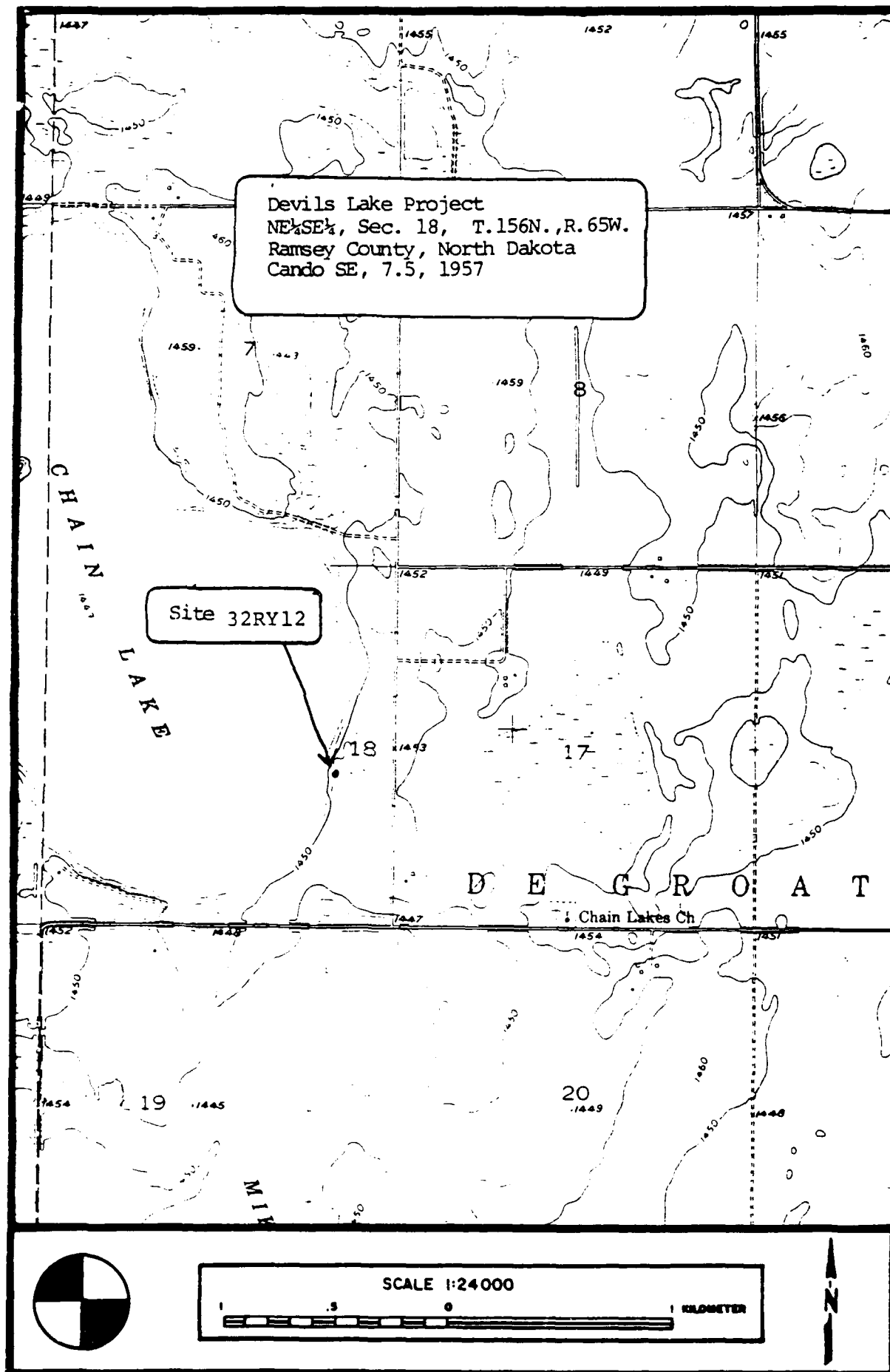
Recorded by M. FloodmanDate 5/22/87

Devils Lake Project
NE $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 18, T.156N., R.65W.
Ramsey County, North Dakota

32RY12
p.5



Possible Burial Mound Looking South



NDCRS SITE FORM
HISTORICAL ARCHEOLOGICAL SITES

Page 1

1. N
2. E
3. S
4. W
5. NE
6. SE
7. SW
8. NW
9. C

I. SITE I.D.

SITS # 3.2 R.Y. 1.3
State County Site Number

Field Code P.E.8.7.D.L.1.7 Site Name _____
Field Code _____ Site Name _____

Map Quad C.A.N.D.O.,S.E.
Map Quad _____

LTL <input type="checkbox"/> Twp <u>1.5.6</u>	R <u>0.6.5</u>	Sec <u>0.7</u>	QQQ <u>8</u>	QQ <u>5</u>	Q <u>8</u>
LTL <input type="checkbox"/> Twp <u>1.5.6</u>	R <u>0.6.5</u>	Sec <u>0.7</u>	QQQ <u>5</u>	QQ <u>8</u>	Q <u>8</u>
LTL <input type="checkbox"/> Twp _____	R _____	Sec _____	QQQ _____	QQ _____	Q _____
LTL <input type="checkbox"/> Twp _____	R _____	Sec _____	QQQ _____	QQ _____	Q _____
LTL <input type="checkbox"/> Twp _____	R _____	Sec _____	QQQ _____	QQ _____	Q _____
LTL <input type="checkbox"/> Twp _____	R _____	Sec _____	QQQ _____	QQ _____	Q _____

II. SITE DESCRIPTION

FEATURE TYPE	CULTURAL MATERIAL	<u>0.1</u> Site Type
<input checked="" type="checkbox"/> Cm Scatter	<input type="checkbox"/> Bone	<u>1.3</u> Context
<input type="checkbox"/> Chimney	<input type="checkbox"/> Ceramics	<u>1.5.7.5.0</u> Site Area
<input type="checkbox"/> Depression	<input type="checkbox"/> Charcoal	m. x m.
<input type="checkbox"/> Dump	<input type="checkbox"/> Cloth	<u> </u> Cultural Depth cm.
<input type="checkbox"/> Earthworks	<input type="checkbox"/> Faunal Remains	<input type="checkbox"/> Depth Indicator
<input type="checkbox"/> Fortification	<input type="checkbox"/> Fire Cracked Rock	Occupation Date
<input type="checkbox"/> Foundation	<input type="checkbox"/> Floral Remains	Begin End
<input type="checkbox"/> Grave	<input checked="" type="checkbox"/> Glass	<u>1.9.0.0</u> <u>1.9.7.4</u>
<input type="checkbox"/> Hearth	<input type="checkbox"/> Hide,Hair,Fur	Basis For Dating
<input type="checkbox"/> Machinery	<input type="checkbox"/> Human Remains	<u>1.0</u>
<input type="checkbox"/> Quarry/Mine	<input type="checkbox"/> Masonry	<u>2</u> Cm Density
<input type="checkbox"/> Rock Art	<input checked="" type="checkbox"/> Metal	<input type="checkbox"/> Isolated Find
<input type="checkbox"/> Trail	<input checked="" type="checkbox"/> Plastic	
<input type="checkbox"/> Wreck	<input type="checkbox"/> Rubber	
<input type="checkbox"/> Other	<input type="checkbox"/> Shell	
	<input checked="" type="checkbox"/> Wood	
	<input type="checkbox"/> Other	

III. ENVIRONMENT

<u>1</u> Landform 1	<u>1.5</u> Landform 2	<u>1.0</u> Slope/Exposure	<u>1.1.8</u> Ecosystem
<input type="checkbox"/> Landform 1	<input type="checkbox"/> Landform 2	<input type="checkbox"/> Slope/Exposure	<input type="checkbox"/> Ecosystem
Elevation	Drainage System	View, Degree	View, Distance
<u>4.4.6</u> m.	<u>D.E.V.I.L.S. LAKE</u>	<u>4</u>	<u>2</u>
Dist Perm Water	Perm Water Type	Dist Seas Water	Seas Water Type
<u> </u> m.	<input type="checkbox"/>	<u> </u> m.	<input type="checkbox"/>

IV. C.R.M.

<u>3</u> Ownership	<input type="checkbox"/> Ownership
<u>0.5.1.8.8.7</u> Fieldwork Date	<u> </u> Fieldwork Date
<u>3</u> Site Condition	<u>1</u> Collection
<u>0</u> Test/Probe	<u>0</u> Excavation
Additional Information	<u>1</u> Management Recommendation
<u> </u>	

SHSND USE

<input type="checkbox"/> Soil Association	<input type="checkbox"/> Ecozone	<input type="checkbox"/> Area Signf	<u> </u> MS Number
<input type="checkbox"/> Soil Association	<input type="checkbox"/> Ecozone	<input type="checkbox"/> Area Signf	<u> </u> MS Number
<input type="checkbox"/> CR Type	<input type="checkbox"/> Verified Site	<input type="checkbox"/> Non-Site	<input type="checkbox"/> E C F <input type="checkbox"/> T F
<input type="checkbox"/> State Registry	<input type="checkbox"/> National Register		

Code

Date Coded

NUCRS SITE FORM
ARCHITECTURAL SITES

Page 1

SITS # 3.2 R.Y. 1.1.3
State County Site Number

Field Code P.E.8.7.D.1.1.7 Site Name _____
Field Code _____ Site Name _____

Map Quad C.A.N.D.O. S.E.
Map Quad _____

LTL	Twp	<u>1.5.6</u>	R	<u>0.6.5</u>	Sec	<u>0.7</u>	QQQ	<u>8</u>	QQ	<u>5</u>	Q	<u>8</u>
LTL	Twp	<u>1.5.6</u>	R	<u>0.6.5</u>	Sec	<u>0.7</u>	QQQ	<u>5</u>	QQ	<u>8</u>	Q	<u>8</u>
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____

City _____

Street # _____

Street # _____

Street Name _____

Street Name _____

of Features 0.3

FEATURE DATA

0.1 Feature #
_____ Const Date
3 Feature Date

4.0 Feature Type
1.3 Context

5 Condition
2 Significance
6 Plan Shape

PORCH

BUILDING MATERIALS

1 Original
_____ Addition/Altered
_____ Removed/None

2.5 Structure System
2.6 Primary Exterior Finish
_____ Secondary Exterior Finish

3 Main Entrance

1.9 Ethnic

1.4 Style

0.5 1.8 18.7 Fieldwork Date

_____ Builder

_____ Engineer

_____ Designer Architect

_____ Other Information

_____ Soil Association _____ Ecozone _____ Area Signf _____ MS Number

_____ Soil Association _____ Ecozone _____ Area Signf _____ MS Number

_____ CR Type _____ Verified Site _____ Non-Site _____ E C F _____ T F

_____ State Registry

_____ National Register

Coder _____

Date Coded _____

I. SITE I.D.

II. SITE DESCRIPTION

SHSND USE

1. N
2. E
3. S
4. W
5. N
6. S
7. S
8. N
9. C

NDCRS ARCHITECTURAL SITE FORM

Page 2

Field Code PE-86-DL-17

SITS NUMBER 32RY13

FEATURE # 01 NAME IN NAME BLOCK Swenson Homestead

BASEMENT	FOUNDATION MATERIALS	STORIES	CORNICE	ROOF TYPE	DATING METHOD
<input checked="" type="checkbox"/> yes	<input type="checkbox"/> Brick	<input type="checkbox"/> 1	<input type="checkbox"/> Metal	<input checked="" type="checkbox"/> Gable	<input type="checkbox"/> Plat Map(s)
<input type="checkbox"/> no	<input type="checkbox"/> Concrete Block	<input type="checkbox"/> 1 1/2	<input type="checkbox"/> Brick	<input type="checkbox"/> Hipped	<input type="checkbox"/> County Atlas
<input type="checkbox"/> unknown	<input checked="" type="checkbox"/> Fieldstone	<input checked="" type="checkbox"/> 2	<input type="checkbox"/> None	<input type="checkbox"/> Deck	<input type="checkbox"/> Date Block
<input type="checkbox"/> other	<input type="checkbox"/> Cut Stone	<input type="checkbox"/> 2 1/2	<input type="checkbox"/> Wood	<input type="checkbox"/> Gambrel	<input type="checkbox"/> Sanborn Map(s)
	<input type="checkbox"/> Poured Concrete	<input type="checkbox"/> 3	<input type="checkbox"/> Other	<input type="checkbox"/> Flat	<input type="checkbox"/> Topo Map(s)
	<input type="checkbox"/> Refaced	<input type="checkbox"/> Other		<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Other
WINDOWS	<input type="checkbox"/> Unknown				<input type="checkbox"/> Deed and Title Search
<input checked="" type="checkbox"/> Original					
<input type="checkbox"/> Altered					

FEATURE DESCRIPTION & STATEMENT OF INTEGRITY Feature 1 represents the residential structure of the farmstead. The feature still stands but is in poor condition and is deteriorating rapidly. The porch is located at the southeastern corner of the house and is of fieldstone with a poured concrete slab over the top. The roof has asphalt shingles. The brick chimney has been torn down and removed. All windows and doors are broken or removed.

SIGNIFICANCE

☐ SIGNIFICANT

☒ NOT SIGNIFICANT

- | | | |
|---|---|--|
| <input type="checkbox"/> Work of Master | <input type="checkbox"/> Visual Landmark | <input type="checkbox"/> Too new |
| <input type="checkbox"/> High Artistic Values | <input type="checkbox"/> Associated with significant event | <input type="checkbox"/> Lacking integrity |
| <input type="checkbox"/> Rep. of type, period, method of construction | <input type="checkbox"/> Associated with devel. of locality | <input checked="" type="checkbox"/> Not High Style |
| <input type="checkbox"/> Other | <input type="checkbox"/> Associated with significant person | <input type="checkbox"/> Other |

JUSTIFICATION OF SIGNIFICANCE The feature is not unique, and is typical of regional homestead houses. It is not designed by a master or lived in by locally significant people. It is not considered to be significant.

Recorded by Mervin G. Floodman

Date May 18, 1987

NUCRS SITE FORM
ARCHITECTURAL SITES

Page 1

SITS # 3.2 R.Y. 1.3

State County Site Number

Field Code P.E.8.6.D.L.1.7

Site Name

S.W.E.N.S.O.N. H.O.M.E.S.T.E.A.D.

Field Code

Site Name

Map Quad

C.A.N.D.O. S.E.

Map Quad

LTL	<input type="checkbox"/>	Twp	<u>1.5.6</u>	R	<u>0.6.5</u>	Sec	<u>0.7</u>	QQQ	<u>8</u>	QQ	<u>5</u>	Q	<u>8</u>
LTL	<input type="checkbox"/>	Twp	<u>1.5.6</u>	R	<u>0.6.5</u>	Sec	<u>0.7</u>	QQQ	<u>5</u>	QQ	<u>8</u>	Q	<u>8</u>
LTL	<input type="checkbox"/>	Twp		R		Sec		QQQ		QQ		Q	
LTL	<input type="checkbox"/>	Twp		R		Sec		QQQ		QQ		Q	
LTL	<input type="checkbox"/>	Twp		R		Sec		QQQ		QQ		Q	
LTL	<input type="checkbox"/>	Twp		R		Sec		QQQ		QQ		Q	

City

Street #

Street #

Street Name

Street Name

of Features 0.3

FEATURE DATA

0.2 Feature #

6.6 Feature Type

5 Condition

1.1 Const Date

1.3 Context

2 Significance

3 Feature Date

6 Plan Shape

PORCH

BUILDING MATERIALS

☐ Original

2.5 Structure System

2 Main Entrance

☐ Addition/Altered

2.8 Primary Exterior Finish

☒ Removed/None

☐ Secondary Exterior Finish

1.9 Ethnic

☐ Builder

2.8 Style

☐ Engineer

0.5 1.8 8.7 Fieldwork Date

☐ Designer Architect

Other Information

☐ Soil Association ☐ Ecozone ☐ Area Signf ☐ MS Number

☐ Soil Association ☐ Ecozone ☐ Area Signf ☐ MS Number

☐ CR Type ☐ Verified Site ☐ Non-Site ☐ E C F ☐ T F

☐ State Registry

☐ National Register

Coder

Date Coded

1. N
2. E
3. S
4. W
5. NE
6. SE
7. SW
8. NW
9. C

I. SITE I.D.

II. SITE DESCRIPTION

SHSND USE

NDCRS ARCHITECTURAL SITE FORM
Page 2

Field Code PE-87-DL-17

SITS NUMBER 32RY13

FEATURE # 02 NAME IN NAME BLOCK Swenson Homestead

BASEMENT	FOUNDATION MATERIALS	STORIES	CORNICE	ROOF TYPE	DATING METHOD
<input type="checkbox"/> yes	<input type="checkbox"/> Brick	<input checked="" type="checkbox"/> 1	<input type="checkbox"/> Metal	<input checked="" type="checkbox"/> Gable	<input type="checkbox"/> Plat Map(s)
<input checked="" type="checkbox"/> no	<input type="checkbox"/> Concrete Block	<input type="checkbox"/> 1 1/2	<input type="checkbox"/> Brick	<input type="checkbox"/> Hipped	<input type="checkbox"/> County Atlas
<input type="checkbox"/> unknown	<input type="checkbox"/> Fieldstone	<input type="checkbox"/> 2	<input type="checkbox"/> None	<input type="checkbox"/> Deck	<input type="checkbox"/> Date Block
<input type="checkbox"/> other	<input type="checkbox"/> Cut Stone	<input type="checkbox"/> 2 1/2	<input type="checkbox"/> Wood	<input type="checkbox"/> Gambrel	<input type="checkbox"/> Sanborn Map(s)
	<input type="checkbox"/> Poured Concrete	<input type="checkbox"/> 3	<input type="checkbox"/> Other	<input type="checkbox"/> Flat	<input type="checkbox"/> Topo Map(s)
	<input type="checkbox"/> Refaced	<input type="checkbox"/> Other		<input type="checkbox"/> Other	<input type="checkbox"/> Other
WINDOWS	<input type="checkbox"/> Unknown				<input checked="" type="checkbox"/> Deed and Title Search
	<input checked="" type="checkbox"/> Other				
<input checked="" type="checkbox"/> Original	<u>Sitting on ground surface</u>				
<input type="checkbox"/> Altered					

FEATURE DESCRIPTION & STATEMENT OF INTEGRITY This feature represents a probable chicken coop or possibly a storage shed of some kind. It is sitting on the ground surface over a small depression with no real foundation. The feature is standing, but continuing to deteriorate. Wooden shakes are present on the roof. The windows and doors are broken and/or removed. Flooring is in poor condition.

SIGNIFICANCE

☐ SIGNIFICANT

☒ NOT SIGNIFICANT

- | | | |
|---|---|--|
| <input type="checkbox"/> Work of Master | <input type="checkbox"/> Visual Landmark | <input type="checkbox"/> Too new |
| <input type="checkbox"/> High Artistic Values | <input type="checkbox"/> Associated with significant event | <input type="checkbox"/> Lacking integrity |
| <input type="checkbox"/> Rep. of type, period, method of construction | <input type="checkbox"/> Associated with devel. of locality | <input checked="" type="checkbox"/> Not High Style |
| <input type="checkbox"/> Other | <input type="checkbox"/> Associated with significant person | <input type="checkbox"/> Other |

JUSTIFICATION OF SIGNIFICANCE The feature is not unique, and is typical of homestead structures in the area. The site is not associated with any important historical event of people and is not designed by a master. It is not considered significant.

Recorded by Mervin G. Floodman

Date May 17, 1987

NDCRS ARCHITECTURAL SITE FORM

Page 3

Field Code PE-86-DL-17SITS NUMBER 32RY13

ACCESS From Devils Lake, take Highway 2 to Grand Harbor. Head one mile beyond town and turn north on the county road. Continue about 12.25 to 12.50 miles. At T intersection, turn west and continue 2.75 miles. Site lies on the south side of the road past the windbreak.

DESCRIPTION OF SITE Site consists of an abandoned homestead dating from the early 1900s (see deed and title search on continuation sheet). It has two standing architectural features: the residence and an outbuilding. Other features have been torn down and removed. The remains of an old outhouse are found to the north along the trees. Most of the old yard is now being cultivated. Many features appear to have been destroyed by the cultivation activity. A wide scatter of cultural materials is present.

FEATURES Feature 1 is a standing residential dwelling, 10 by nine meters.
Feature 2 is a chicken coop or a storage shed, eight by eight meters.
Feature 3 is outhouse remnants in tree line.
Other features were destroyed by cultivation activities.

SITE AREA 15750 (in meters)

OWNER'S NAME, ADDRESS, PHONE # Joel and Donna Storsteen

PROJECT TITLE Devils Lake Flood Control Project

REPORT TITLE _____

PROJECT SUPERVISOR Mervin G. Floodman REPORT AUTHOR Mervin G. Floodman

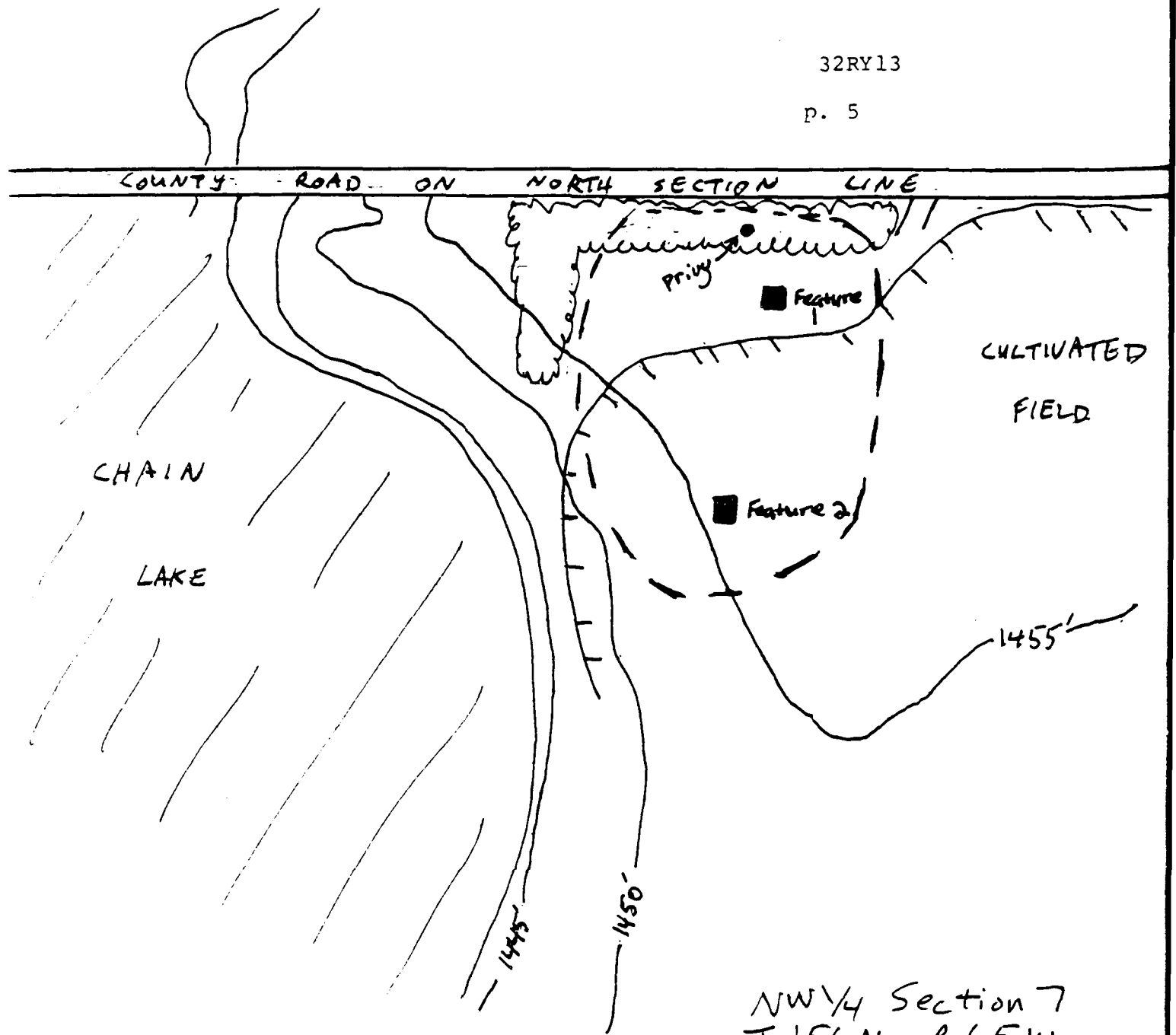
STATEMENT OF SIGNIFICANCE AND INTEGRITY The site is typical of homesteads in the area. It is not unique, nor does it have any architectural merit. The site is not associated with any important local historical events or people. While the buildings are standing they are in poor condition and continue to deteriorate. Much has been destroyed by current cultivation. The site is not considered significant.

Item No.

NDCRS ARCHITECTURAL SITE FORM, Page 3DESCRIPTION OF SITE: Deed and Title Search:Patent Record1. P.R. 5, p.250. Homestead Certificate No. 3207, U.S. Government to
Arant Swenson, April 12, 1900.2. Vol. 35, p.273. Document No. 73314, Administrators Deed, July 24,
1922, Arant Swenson deceased, Bernt Anderson acted as administrator of
the estate, sold to Peter Heien.3. Vol. 53, p.142. Document No. 111281, Administrators Deed, May 23, 1946.
Peter Heien deceased. Harold Hanson acted as administrator of estate and
sold to Elvin T. Hovstad.4. Miscellaneous 24, p.293. Document #157715, Contract for deed April
10, 1974, Elvin Hovstad to Joel and Donna Storsteen.Recorded by Mervin G. FloodmanDate May 17, 1987

32RY13

p. 5



1445' usgs quad elevations

Trees/Wind break

FIELD EDGE

SITE LIMITS

Lake

NW 1/4 Section 7
T. 156 N., R. 65 W.

N

RAMSEY COUNTY, ND

0 100 M

p.6

Devils Lake Project
NW¼ Section 7, T.156N., R.65W.,
Ramsey County, North Dakota

32RY13



Feature #1 Looking Northwest



Feature #1 Looking Southeast

Devils Lake Project
NW¼, Section 7, T.156N., R.65W.
Ramsey County, North Dakota

32RY13

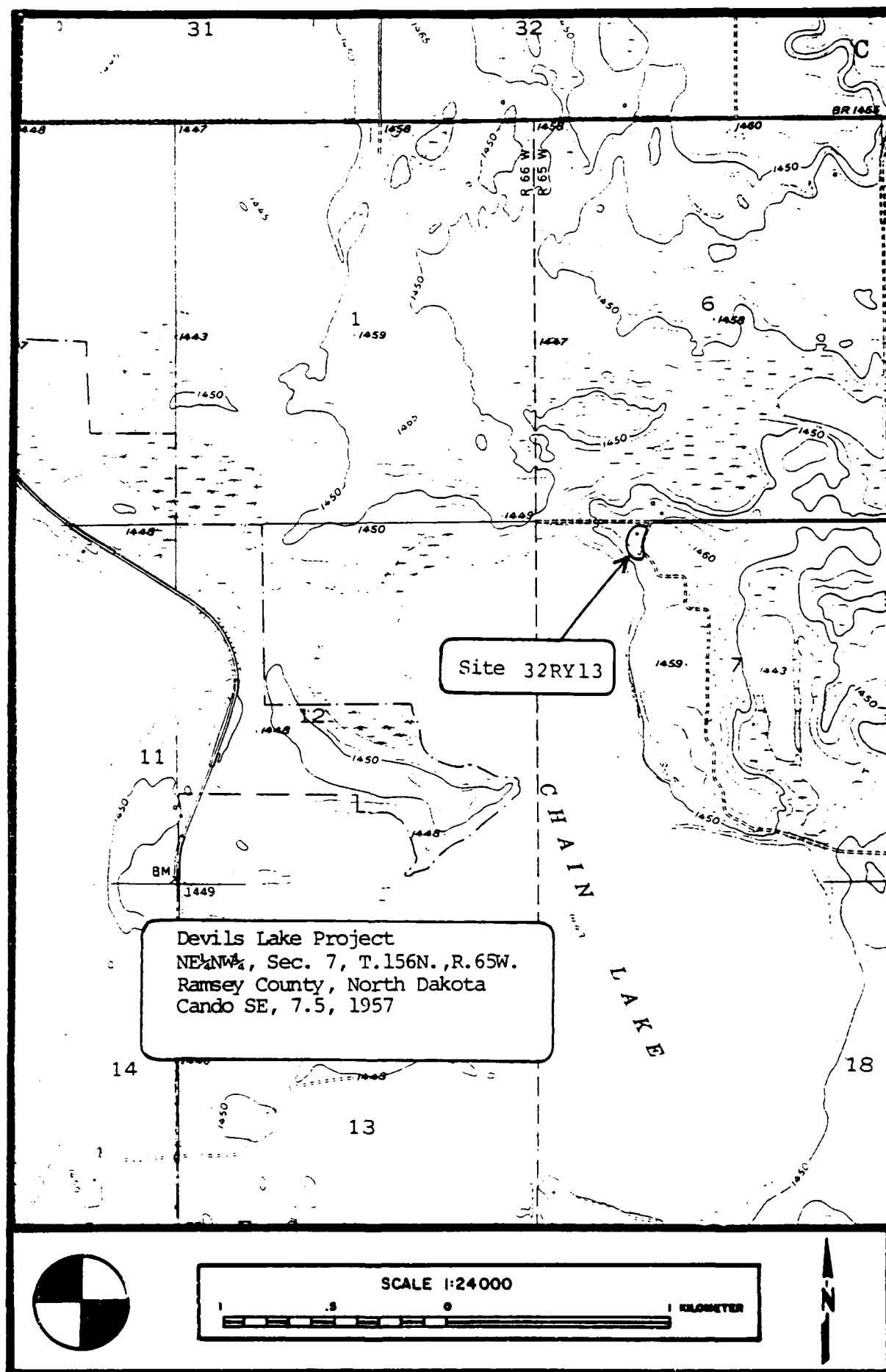
p. 7



Feature #2 Looking Northwest



Feature #2 Looking Southwest



NDCRS SITE FORM
HISTORICAL ARCHEOLOGICAL SITES

Page 1

I. SITE I.D.

SITS # 32 R.Y. 14
State County Site Number
Field Code PE 86 D L 1 9 Site Name E.M.O.R.Y. H.O.M.E.S.T.E.A.D
Field Code _____ Site Name _____
Map Quad _____ S.W.E.E.T.W.A.T.E.R.
Map Quad _____
LTL 1 Twp 55 R 063 Sec 31 QQQ 3 QQ 6 Q 5
LTL 1 Twp _____ R _____ Sec _____ QQQ _____ QQ _____ Q _____
LTL 1 Twp _____ R _____ Sec _____ QQQ _____ QQ _____ Q _____
LTL 1 Twp _____ R _____ Sec _____ QQQ _____ QQ _____ Q _____
LTL 1 Twp _____ R _____ Sec _____ QQQ _____ QQ _____ Q _____
LTL 1 Twp _____ R _____ Sec _____ QQQ _____ QQ _____ Q _____

II. SITE DESCRIPTION

FEATURE TYPE	CULTURAL MATERIAL	<u>01</u> Site Type
<u>1</u> Cm Scatter	<u>1</u> Bone	<u>13</u> Context
<u>1</u> Chimney	<u>1</u> Ceramics	<u>14884</u> Site Area
<u>1</u> Depression	<u>1</u> Charcoal	m. x m.
<u>1</u> Dump	<u>1</u> Cloth	<u>1</u> Cultural Depth cm.
<u>1</u> Earthworks	<u>1</u> Faunal Remains	<u>1</u> Depth Indicator
<u>1</u> Fortification	<u>1</u> Fire Cracked Rock	Occupation Date
<u>1</u> Foundation	<u>1</u> Floral Remains	Begin End
<u>1</u> Grave	<u>1</u> Glass	<u>1885</u> <u>1947</u>
<u>1</u> Hearth	<u>1</u> Hide, Hair, Fur	Basis For Dating
<u>1</u> Machinery	<u>1</u> Human Remains	<u>10</u>
<u>1</u> Quarry/Mine	<u>1</u> Masonry	<u>2</u> Cm Density
<u>1</u> Rock Art	<u>1</u> Metal	<u>1</u> Isolated Find
<u>1</u> Trail	<u>1</u> Plastic	
<u>1</u> Wreck	<u>1</u> Rubber	
<u>1</u> Other	<u>1</u> Shell	
	<u>1</u> Wood	
	<u>1</u> Other	

III. ENVIRONMENT

1 Landform 1 15 Landform 2 10 Slope/Exposure 18 Ecosystem
1 Landform 1 _____ Landform 2 _____ Slope/Exposure _____ Ecosystem
Elevation _____ Drainage System DEVILS LAKE View, Degree View, Distance
449 m. _____ 4 2
Dist Perm Water _____ Perm Water Type 1 Dist Seas Water _____ Seas Water Type _____

IV. C.R.M.

3 Ownership _____ Ownership _____
052187 Fieldwork Date _____ Fieldwork Date _____
3 Site Condition 1 Collection 0 Test/Probe 0 Excavation
Additional Information 1 Management Recommendation

V. USE

____ Soil Association _____ Ecozone _____ Area Signf _____ MS Number
____ Soil Association _____ Ecozone _____ Area Signf _____ MS Number
____ CR Type _____ Verified Site _____ Non-Site _____ E C F _____ T F
____ State Registry _____ National Register

Coder

Date Coded

1. N
2. E
3. S
4. W
5. NE
6. SE
7. SW
8. NW
9. C

NDCRS SITE FORM
ARCHITECTURAL SITES

Page 1

SITS # 3.2 R.Y. 14

State County Site Number

Field Code PE 8.6 D.L. 1.9

Site Name E.M.O.R.Y. H.O.M.E.S.T.E.A.D.

Field Code _____

Site Name _____

Map Quad S.W.E.E.T.W.A.T.E.R.

Map Quad _____

LTL	Twp	<u>1.5.5</u>	R	<u>0.6.3</u>	Sec	<u>3.1</u>	QQQ	<u>3</u>	QQ	<u>6</u>	Q	<u>5</u>
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____

1. N $\frac{1}{2}$
2. E $\frac{1}{2}$
3. S $\frac{1}{2}$
4. W $\frac{1}{2}$
5. NE $\frac{1}{4}$
6. SE $\frac{1}{4}$
7. SW $\frac{1}{4}$
8. NW $\frac{1}{4}$
9. C

City _____

Street # _____

Street # _____

Street Name _____

Street Name _____

of Features 0.3

FEATURE DATA

0.1 Feature #
_____ Const Date
2 Feature Date

6.2 Feature Type
1.3 Context

5 Condition
2 Significance
5 Plan Shape

PORCH

☐ Original
☐ Addition/Altered
☒ Removed/None

BUILDING MATERIALS

2.5 Structure System
2.6 Primary Exterior Finish
_____ Secondary Exterior Finish

2 Main Entrance

_____ Ethnic
1.4 Style

_____ Builder
_____ Engineer
_____ Designer Architect

0.5 2.1 8.7 Fieldwork Date

_____ Other Information

_____ Soil Association _____ Ecozone _____ Area Signf _____ MS Number

_____ Soil Association _____ Ecozone _____ Area Signf _____ MS Number

☐ CR Type ☐ Verified Site ☐ Non-Site ☐ E C F ☐ T F

☐ State Registry

☐ National Register

Coder _____

Date Coded _____

I. SITE I.D.

II. SITE DESCRIPTION

SHSND USE

NDCRS ARCHITECTURAL SITE FORM
Page 2

Field Code PE-86-DL-19

SITS NUMBER 32RY14

FEATURE # 01 NAME IN NAME BLOCK Emory Homestead

BASEMENT	FOUNDATION MATERIALS	STORIES	CORNICE	ROOF TYPE	DATING METHOD
<input type="checkbox"/> yes	<input type="checkbox"/> Brick	<input checked="" type="checkbox"/> 1	<input type="checkbox"/> Metal	<input type="checkbox"/> Gable	<input type="checkbox"/> Plat Map(s)
<input type="checkbox"/> no	<input type="checkbox"/> Concrete Block	<input type="checkbox"/> 1 1/2	<input type="checkbox"/> Brick	<input type="checkbox"/> Hipped	<input type="checkbox"/> County Atlas
<input type="checkbox"/> unknown	<input checked="" type="checkbox"/> Fieldstone	<input type="checkbox"/> 2	<input type="checkbox"/> None	<input type="checkbox"/> Deck	<input type="checkbox"/> Date Block
<input type="checkbox"/> other	<input type="checkbox"/> Cut Stone	<input type="checkbox"/> 2 1/2	<input type="checkbox"/> Wood	<input checked="" type="checkbox"/> Gambrel	<input type="checkbox"/> Sanborn Map(s)
	<input checked="" type="checkbox"/> Poured Concrete	<input type="checkbox"/> 3	<input type="checkbox"/> Other	<input type="checkbox"/> Flat	<input type="checkbox"/> Topo Map(s)
	<input type="checkbox"/> Refaced	<input type="checkbox"/> Other		<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Other
WINDOWS	<input type="checkbox"/> Unknown				<input type="checkbox"/> Deed & Title Search
<input checked="" type="checkbox"/> Original					
<input type="checkbox"/> Altered					

FEATURE DESCRIPTION & STATEMENT OF INTEGRITY Feature 1 is standing frame structure
representing a barn of a farmstead complex. The structure is rectangular, measuring
23 m x 5 m. The foundation is poured concrete with some fieldstone. The roof is gambrel
style with openings or air vents on the roof. The roof has wooden shake shingles.
The doors are padlocked and is currently utilized for some storage. In all, the
building is fairly well intact but declining with age.

SIGNIFICANCE

☐ SIGNIFICANT

☒ NOT SIGNIFICANT

<input type="checkbox"/> Work of Master	<input type="checkbox"/> Visual Landmark	<input type="checkbox"/> Too new
<input type="checkbox"/> High Artistic Values	<input type="checkbox"/> Associated with significant event	<input checked="" type="checkbox"/> Lacking integrity
<input type="checkbox"/> Rep. of type, period, method of construction	<input type="checkbox"/> Associated with devel. of locality	<input checked="" type="checkbox"/> Not High Style
<input type="checkbox"/> Other	<input type="checkbox"/> Associated with significant person	<input type="checkbox"/> Other

JUSTIFICATION OF SIGNIFICANCE The barn is not unique, and is typical of many such struc-
tures in the region. The building lacks architectural merit. It is not associated
with any known historical event or person. It is therefore beleived to be
insignificant.

Recorded by M. Floodman

Date 05/21/87

NUCRS SITE FORM
ARCHITECTURAL SITES

Page 1

1. N $\frac{1}{2}$
2. E $\frac{1}{2}$
3. S $\frac{1}{2}$
4. W $\frac{1}{2}$
5. NE $\frac{1}{4}$
6. SE $\frac{1}{4}$
7. SW $\frac{1}{4}$
8. NW $\frac{1}{4}$
9. C

SITS # 3.2 R.Y. 14
State County Site Number
Field Code P E 8 6 D L 1 9 Site Name E M O R Y H O M E S T E A D
Field Code _____ Site Name _____

Map Quad S W E E T W A T E R
Map Quad _____

LTL	Twp	<u>1 5 5</u>	R	<u>0 6 3</u>	Sec	<u>3 1</u>	QQQ	<u>3</u>	QQ	<u>6</u>	Q	<u>5</u>
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____

City _____

Street # _____

Street # _____

Street Name _____

Street Name _____

of Features 0 3

FEATURE DATA

0 3 Feature #
_____ Const Date
2 Feature Date

6 6 Feature Type
1 3 Context

5 Condition
2 Significance
5 Plan Shape

PORCH

_____ Original
_____ Addition/Altered
1 Removed/None

BUILDING MATERIALS

2 5 Structure System
2 6 Primary Exterior Finish
_____ Secondary Exterior Finish

6 Main Entrance

_____ Ethnic
1 4 Style

_____ Builder
_____ Engineer
_____ Designer Architect

0 5 2 4 8 7 Fieldwork Date

_____ Other Information

_____ Soil Association	_____ Ecozone	_____ Area Signf	_____ MS Number
_____ Soil Association	_____ Ecozone	_____ Area Signf	_____ MS Number
_____ CR Type	_____ Verified Site	_____ Non-Site	_____ E C F _____ T F
_____ State Registry	_____ National Register		

Coder _____

Date Coded _____

I. SITE I.D.

II. SITE DESCRIPTION

SHSND USE

NDCRS ARCHITECTURAL SITE FORM
Page 2

Field Code <u>PE-86-DC-19</u>				SITS NUMBER <u>32RY14</u>	
FEATURE # <u>03</u>		NAME IN NAME BLOCK <u>Emory Homestead</u>			

BASEMENT	FOUNDATION MATERIALS	STORIES	CORNICE	ROOF TYPE	DATING METHOD
<input type="checkbox"/> yes	<input type="checkbox"/> Brick	<input checked="" type="checkbox"/> 1	<input type="checkbox"/> Metal	<input type="checkbox"/> Gable	<input type="checkbox"/> Plat Map(s)
<input checked="" type="checkbox"/> no	<input type="checkbox"/> Concrete Block	<input type="checkbox"/> 1 1/2	<input type="checkbox"/> Brick	<input type="checkbox"/> Hipped	<input type="checkbox"/> County Atlas
<input type="checkbox"/> unknown	<input type="checkbox"/> Fieldstone	<input type="checkbox"/> 2	<input type="checkbox"/> None	<input type="checkbox"/> Deck	<input type="checkbox"/> Date Block
<input type="checkbox"/> other	<input type="checkbox"/> Cut Stone	<input type="checkbox"/> 2 1/2	<input type="checkbox"/> Wood	<input type="checkbox"/> Gambrel	<input type="checkbox"/> Sanborn Map(s)
	<input checked="" type="checkbox"/> Poured Concrete	<input type="checkbox"/> 3	<input type="checkbox"/> Other	<input type="checkbox"/> Flat	<input type="checkbox"/> Topo Map(s)
	<input type="checkbox"/> Refaced	<input type="checkbox"/> Other		<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other
WINDOWS	<input type="checkbox"/> Unknown			<input type="checkbox"/> Shed	<input type="checkbox"/> Deed & Title Search
<input checked="" type="checkbox"/> Original					
<input type="checkbox"/> Altered					

FEATURE DESCRIPTION & STATEMENT OF INTEGRITY Feature 3 is beleived to represent an
abandoned chicken house. It measures Ca. 5 by 10 m. The wood frame structure has a
distinctshed type roof, which is slanted north to south, with wooden shake shingles.
The east end of the building adjoins Feature 4. The two features combined is
actually one large building. The main entrance is the southeast end. The Feature 3
retains some of its integrity, but is deteriorating.

SIGNIFICANCE

<input type="checkbox"/> SIGNIFICANT		<input checked="" type="checkbox"/> NOT SIGNIFICANT
<input type="checkbox"/> Work of Master	<input type="checkbox"/> Visual Landmark	<input type="checkbox"/> Too new
<input type="checkbox"/> High Artistic Values	<input type="checkbox"/> Associated with significant event	<input checked="" type="checkbox"/> Lacking integrity
<input type="checkbox"/> Rep. of type, period,	<input type="checkbox"/> Associated with devel. of locality	<input checked="" type="checkbox"/> Not High Style
<input type="checkbox"/> method of construction	<input type="checkbox"/> Associated with significant person	
<input type="checkbox"/> Other		<input type="checkbox"/> Other

JUSTIFICATION OF SIGNIFICANCE The feature is not distinctive or architeturally
significant. It is not associated with any historical event or personage. It is in
only fair condition.

Recorded by M. Floodman Date 05/21/87

NUCRS SITE FORM
ARCHITECTURAL SITES

Page 1

SITS # 32 14
State County Site Number

Field Code P.E.8.6.D.L.1.9 Site Name EMORY HOME SITE
Field Code _____ Site Name _____

Map Quad SW E E T W A T E R
Map Quad _____

LTL	Twp	<u>155</u>	R	<u>063</u>	Sec	<u>31</u>	QQQ	<u>3</u>	QQ	<u>6</u>	Q	<u>5</u>
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____

1. N $\frac{1}{2}$
2. E $\frac{1}{2}$
3. S $\frac{1}{2}$
4. W $\frac{1}{2}$
5. NE $\frac{1}{4}$
6. SE $\frac{1}{4}$
7. SW $\frac{1}{4}$
8. NW $\frac{1}{4}$
9. C

City _____
Street # _____ Street # _____
Street Name _____ Street Name _____
of Features 03

FEATURE DATA

<u>04</u> Feature #	<u>55</u> Feature Type	<u>5</u> Condition
_____ Const Date	<u>13</u> Context	<u>2</u> Significance
<u>2</u> Feature Date		<u>5</u> Plan Shape

PORCH

BUILDING MATERIALS

<u>Original</u>	<u>25</u> Structure System	<u>3</u> Main Entrance
<u>Addition/Altered</u>	<u>26</u> Primary Exterior Finish	
<u>1</u> Removed/None	_____ Secondary Exterior Finish	

<u>_____</u> Ethnic	<u>_____</u> Builder
<u>14</u> Style	<u>_____</u> Engineer
<u>0512187</u> Fieldwork Date	<u>_____</u> Designer Architect

_____ Other Information

_____ Soil Association	_____ Ecozone	_____ Area Signf	_____ MS Number
_____ Soil Association	_____ Ecozone	_____ Area Signf	_____ MS Number
<u>_____</u> CR Type	<u>_____</u> Verified Site	<u>_____</u> Non-Site	<u>_____</u> E C F <u>_____</u> T F
<u>_____</u> State Registry	<u>_____</u> National Register		

Coder _____ Date Coded _____

I. SITE I.D.

II. SITE DESCRIPTION

SHSNO USE

Page 2

Field Code PE-86-DL-19

SITS NUMBER 32RY14

FEATURE # 04 NAME IN NAME BLOCK Emory Homestead

BASEMENT

FOUNDATION MATERIALS

STORIES

CORNICE

ROOF TYPE

DATING METHOD

_____	yes
<u> 1 </u>	no
_____	unknown
_____	other

- Brick
- Concrete Block
- Fieldstone
- Cut Stone
- 1 Poured Concrete
- Refaced
- Unknown
- Other

1	1
1	1 1/2
2	2
2	2 1/2
3	3
Other	Other

- ☐ Metal
- ☐ Brick
- ☐ None
- ☐ Wood
- ☐ Other

☐ Gable
☐ Hipped
☐ Deck
☒ Gambrel
☐ Flat
☐ Other

_____ Plat Map(s)
 _____ County Atlas
 _____ Date Block
 _____ Sanborn Map(s)
 _____ Topo Map(s)
 _____ Other

WINDOWS

— Unknown
— Other

Deed & Title Search

1	Original
	Altered

FEATURE DESCRIPTION & STATEMENT OF INTEGRITY	<u>This feature adjoins Feature 3 on the east end and is physically connected. It is a small wood frame garage with an overhead door on the south, measuring 4 by 7 m. The roof is gambrel shaped with wooden shake shingles. The feature is in fair condition, but is deteriorating.</u>
--	---

SIGNIFICANCE

SIGNIFICANT

1 NOT SIGNIFICANT

- Work of Master
- High Artistic Values
- Rep. of type, period,
method of construction
- Other

Visual Landmark

- Associated with significant event
- Associated with devel. of locality
- Associated with significant person

Too new
1 Lacking integrity
1 Not High Style
Other

JUSTIFICATION OF SIGNIFICANCE Feature 4 is not unique nor architecturally important.
It is typical of many such structures in area. The feature is not associated with any
significant historical event or personage.

Recorded by M. Floodman

Date 5/21/87

Field Code PE-86-DL-19SITS NUMBER 32RY14

ACCESS From Devils Lake take Highway 20 about 2.5 miles north, then turn east on the county road and continue 3.5 miles. Then turn north and proceed 2 5 miles. The site lies on the west side of the road, across a field.

DESCRIPTION OF SITE The site is an abandoned farm. It was occupied from about 1885 to the 1940s (see the Deed and Tile Search on the Continuation Page). It is located on the eastern shore of Sweetwater Lake. The site consists of three structures. The old main house has been removed, with only the concrete steps remaining. Still standing are a barn, chicken house and garage. One other structure at the site has been removed (see Features below).

FEATURES Feature #1 is a standing wood frame structure representing an old barn. It is ca. 23 x 5 m in size.

Feature #2 - is a cement and field stone foundation with no superstructure remaining. It measures ca. 12 x 6 m.

Feature #3 - is a standing wood frame chicken house, 5 x 10 m in dimension.

(see Continuation Page)

SITE AREA 14,884 (in meters)

OWNER'S NAME, ADDRESS, PHONE # William P. and Jack McCarthy

PROJECT TITLE Devils Lake Flood Control Project

REPORT TITLE _____

PROJECT SUPERVISOR M. Floodman

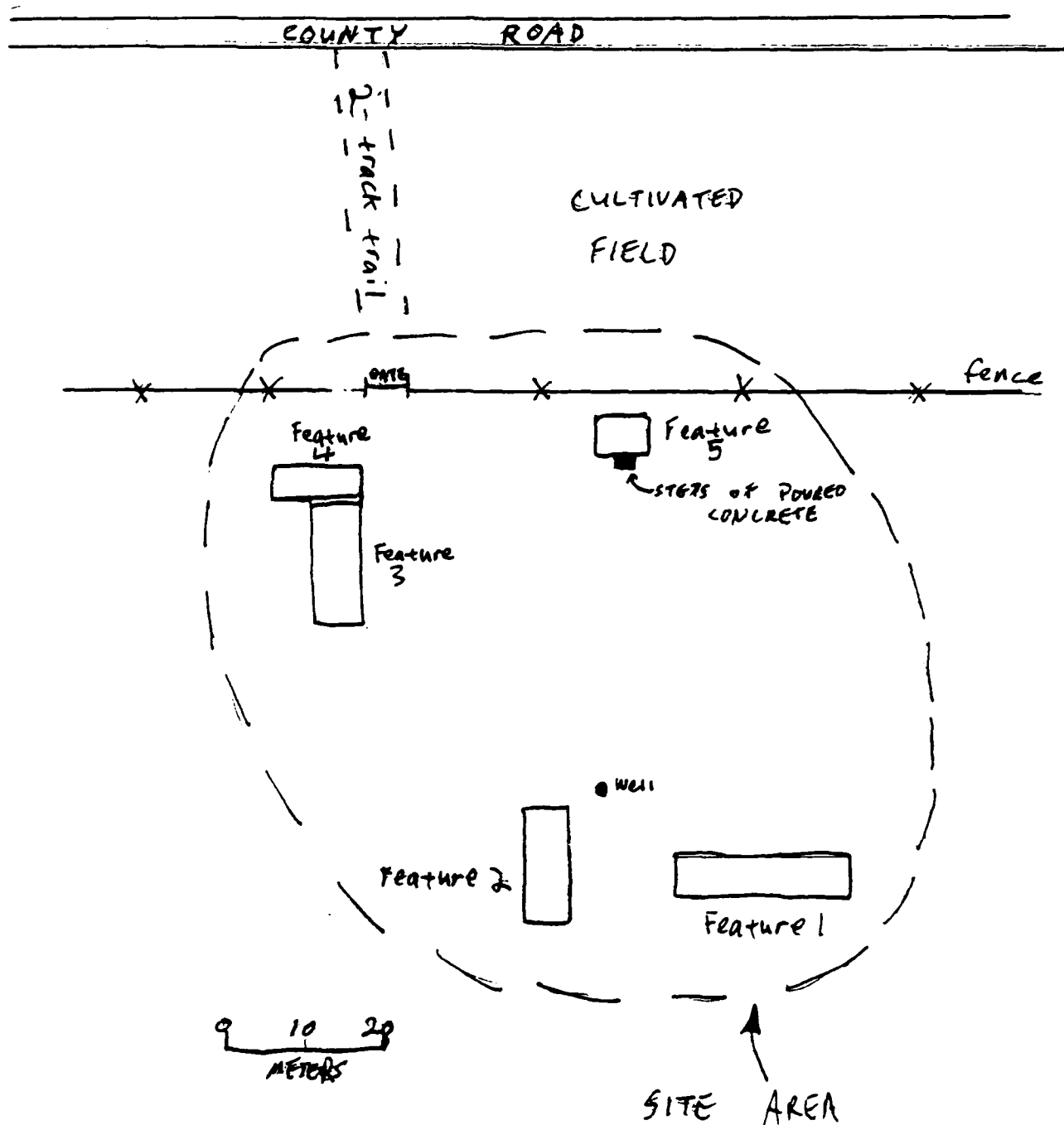
REPORT AUTHOR M. Floodman

STATEMENT OF SIGNIFICANCE AND INTEGRITY The site is in fair condition. However, the main house is gone, and at least one other structure has been removed. The site is not unique or architecturally important. It is not associated with a famous person or historical event. It is therefore believed not to be significant.

Page 4

Site Number 32RY14

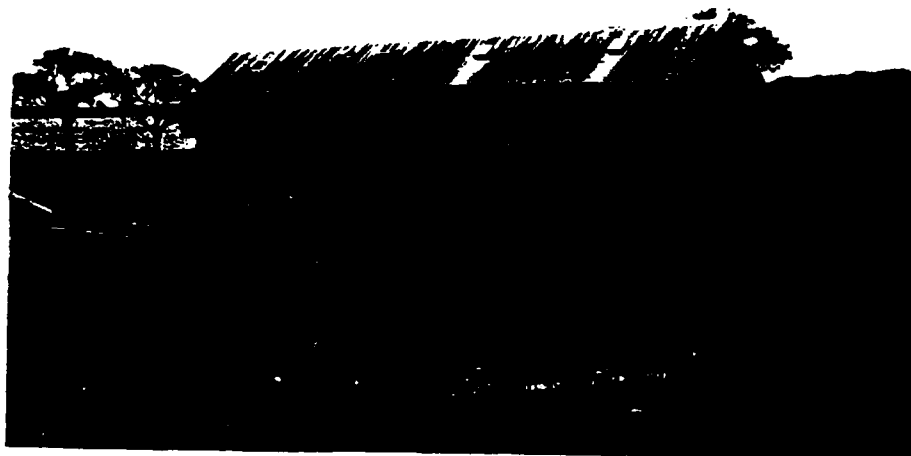
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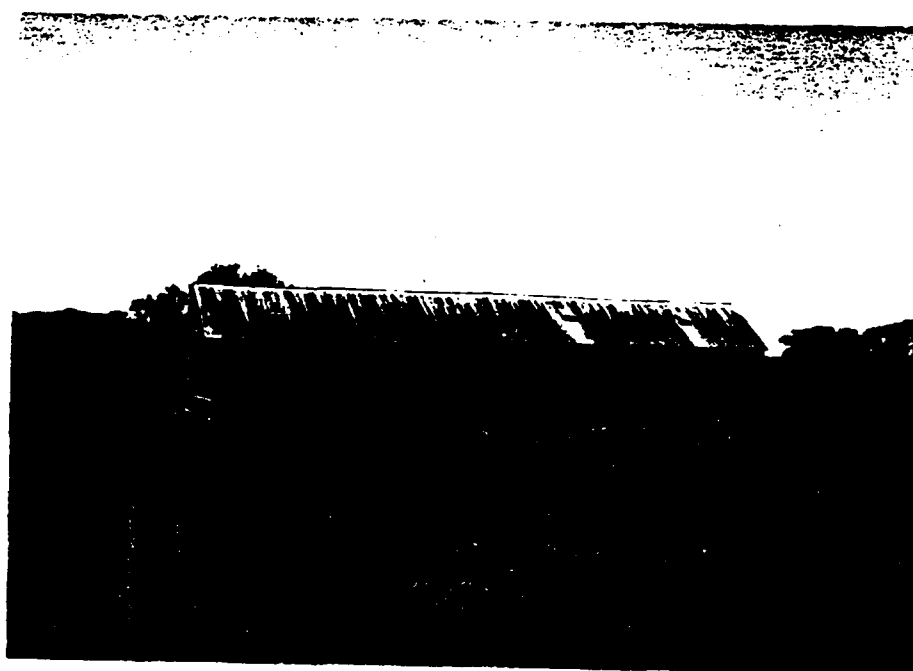
SEY4 NEY4 Section 31
T. 155N. R. 63W.
RAMSEY COUNTY, ND

Devils Lake Project
SE $\frac{1}{4}$ NE $\frac{1}{4}$, Sec. 31, T.155N., R.63W.
Ramsey County, North Dakota

32RY14
p.6



Feature #1 Looking Southwest



Feature #1 Looking Northwest

Devils Lake Project
SE $\frac{1}{4}$ NE $\frac{1}{4}$, Sec. 31, T.155N., R.63W.
Ramsey County, North Dakota

32RY14
p. 7



Features 3 and 4 Looking Northeast



Features #3 and 4 Looking Northwest

Devils Lake Project
SE1/4NE4, Sec. 31, T.155N., R.63W.
Ramsey County, North Dakota

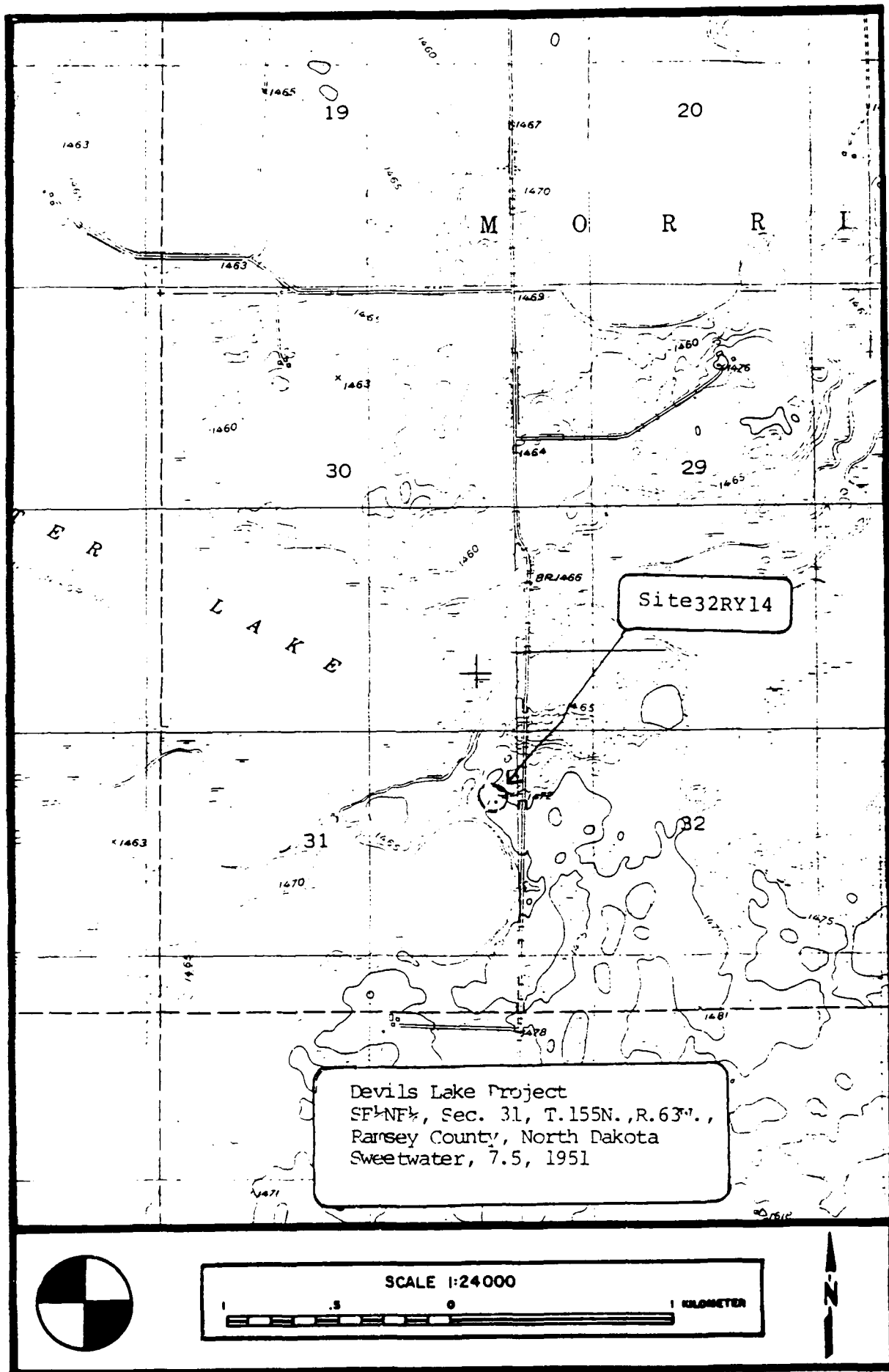
32RY14
p. 8



Feature #2 Looking West



Feature #5 Looking North



NDCRS SITE FORM
HISTORICAL ARCHEOLOGICAL SITES

Page 1

I. SITE I.D.

SITS # 3.2 R.Y. 15
State County Site Number
Field Code P.E.8.6.D.L.1.8 Site Name A.N.D.E.R.S.O.N H.O.M.E.S.T.E.A.D
Field Code _____ Site Name _____
Map Quad _____ C.A.N.D.O. S.E.
Map Quad _____
LTL 1 Twp 5.6 R 0.6.5 Sec 1.8 QQQ 4 QQ 7 Q 7
LTL 1 Twp _____ R _____ Sec _____ QQQ _____ QQ _____ Q _____
LTL 1 Twp _____ R _____ Sec _____ QQQ _____ QQ _____ Q _____
LTL 1 Twp _____ R _____ Sec _____ QQQ _____ QQ _____ Q _____
LTL 1 Twp _____ R _____ Sec _____ QQQ _____ QQ _____ Q _____
LTL 1 Twp _____ R _____ Sec _____ QQQ _____ QQ _____ Q _____

II. SITE DESCRIPTION

FEATURE TYPE	CULTURAL MATERIAL	<u>0.1</u> Site Type
<input checked="" type="checkbox"/> Cm Scatter	<input type="checkbox"/> Bone	<u>1.3</u> Context
<input type="checkbox"/> Chimney	<input checked="" type="checkbox"/> Ceramics	<u>1.48.8.4</u> Site Area
<input type="checkbox"/> Depression	<input type="checkbox"/> Charcoal	m. x m.
<input type="checkbox"/> Dump	<input type="checkbox"/> Cloth	<u>1.3</u> Cultural Depth cm.
<input type="checkbox"/> Earthworks	<input type="checkbox"/> Faunal Remains	<input type="checkbox"/> Depth Indicator
<input type="checkbox"/> Fortification	<input type="checkbox"/> Fire Cracked Rock	Occupation Date
<input checked="" type="checkbox"/> Foundation	<input type="checkbox"/> Floral Remains	Begin <u>1.8.9.0</u> End <u>1.9.7.0</u>
<input type="checkbox"/> Grave	<input checked="" type="checkbox"/> Glass	Basis For Dating <u>1.0</u>
<input type="checkbox"/> Hearth	<input type="checkbox"/> Hide, Hair, Fur	<u>2</u> Cm Density
<input type="checkbox"/> Machinery	<input type="checkbox"/> Human Remains	<input type="checkbox"/> Isolated Find
<input type="checkbox"/> Quarry/Mine	<input checked="" type="checkbox"/> Masonry	
<input type="checkbox"/> Rock Art	<input checked="" type="checkbox"/> Metal	
<input type="checkbox"/> Trail	<input checked="" type="checkbox"/> Plastic	
<input type="checkbox"/> Wreck	<input checked="" type="checkbox"/> Rubber	
<input type="checkbox"/> Other	<input type="checkbox"/> Shell	
	<input checked="" type="checkbox"/> Wood	
	<input type="checkbox"/> Other	

III. ENVIRONMENT

1 Landform 1 0.7 Landform 2 1.0 Slope/Exposure 1.8 Ecosystem
☐ Landform 1 _____ Landform 2 _____ Slope/Exposure _____ Ecosystem
Elevation _____ Drainage System D.E.V.I.L.S. L.A.K.E. View, Degree 4 View, Distance 2
Dist Perm Water 5.2.0 m. Perm Water Type 1 Dist Seas Water 1.8.0 m. Seas Water Type 1

IV. C.R.M.

3 Ownership ☐ Ownership
10.5.11.9.18.7 Fieldwork Date _____ Fieldwork Date _____
3 Site Condition 1 Collection 0 Test/Probe 0 Excavation
Additional Information 1 Management Recommendation

SHSND USE

☐ Soil Association ☐ Ecozone ☐ Area Signf _____ MS Number
☐ Soil Association ☐ Ecozone ☐ Area Signf _____ MS Number
☐ CR Type ☐ Verified Site ☐ Non-Site ☐ E C F ☐ T F
☐ State Registry ☐ National Register

Code

Date Coded

1. N
2. E
3. S
4. W
5. N
6. S
7. S
8. M
9. C

NUCRS SITE FORM
ARCHITECTURAL SITES

Page 1

SITS # 3.2 R.Y. 1.5
State County Site Number

Field Code P.E. 87 D.L. 1.8 Site Name A.N.D.E.R.S.O.N., H.O.M.E.S.T.E.A.D
Field Code _____ Site Name _____

Map Quad C.A.N.D.O., S.E
Map Quad _____

LTL	Twp	<u>1.5.6</u>	R	<u>0.6.5</u>	Sec	<u>1.8</u>	QQQ	<u>1.4</u>	QQ	<u>7</u>	Q	<u>7</u>
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____

1. N $\frac{1}{2}$
2. E $\frac{1}{2}$
3. S $\frac{1}{2}$
4. W $\frac{1}{2}$
5. NE $\frac{1}{4}$
6. SE $\frac{1}{4}$
7. SW $\frac{1}{4}$
8. NW $\frac{1}{4}$
9. C

City _____

Street # _____

Street # _____

Street Name _____

Street Name _____

of Features 0.1

FEATURE DATA

0.1 Feature #
_____ Const Date
2 Feature Date

4.0 Feature Type
1.3 Context

3 Condition
2 Significance
2 Plan Shape

PORCH

BUILDING MATERIALS

1 Original
_____ Addition/Altered
_____ Removed/None

2.5 Structure System
2.6 Primary Exterior Finish
_____ Secondary Exterior Finish

2 Main Entrance

_____ Ethnic
1.4 Style

_____ Builder
_____ Engineer
_____ Designer Architect

0.5.1.9.8.7 Fieldwork Date

Other Information

_____ Soil Association	_____ Ecozone	_____ Area Signf	_____ MS Number
_____ Soil Association	_____ Ecozone	_____ Area Signf	_____ MS Number
<u>_____</u> CR Type	<u>_____</u> Verified Site	<u>_____</u> Non-Site	<u>_____</u> E C F <u>_____</u> T F
<u>_____</u> State Registry	<u>_____</u> National Register		

Coder _____

Date Coded _____

I. SITE I.D.

II. SITE DESCRIPTION

SHSND USE

NDCRS ARCHITECTURAL SITE FORM
Page 2

Field Code PE-86-DL-18

SITS NUMBER 32RY15

FEATURE # 01 NAME IN NAME BLOCK Anderson Homestead

BASEMENT	FOUNDATION MATERIALS	STORIES	CORNICE	ROOF TYPE	DATING METHOD
<input checked="" type="checkbox"/> yes	<input type="checkbox"/> Brick	<input type="checkbox"/> 1	<input type="checkbox"/> Metal	<input checked="" type="checkbox"/> Gable	<input type="checkbox"/> Plat Map(s)
<input type="checkbox"/> no	<input checked="" type="checkbox"/> Concrete Block	<input type="checkbox"/> 1 1/2	<input type="checkbox"/> Brick	<input type="checkbox"/> Hipped	<input type="checkbox"/> County Atlas
<input type="checkbox"/> unknown	<input type="checkbox"/> Fieldstone	<input checked="" type="checkbox"/> 2	<input type="checkbox"/> None	<input type="checkbox"/> Deck	<input type="checkbox"/> Date Block
<input type="checkbox"/> other	<input type="checkbox"/> Cut Stone	<input type="checkbox"/> 2 1/2	<input type="checkbox"/> Wood	<input type="checkbox"/> Gambrel	<input type="checkbox"/> Sanborn Map(s)
	<input type="checkbox"/> Poured Concrete	<input type="checkbox"/> 3	<input type="checkbox"/> Other	<input type="checkbox"/> Flat	<input type="checkbox"/> Topo Map(s)
	<input type="checkbox"/> Refaced	<input type="checkbox"/> Other		<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Other
WINDOWS	<input type="checkbox"/> Unknown				<input type="checkbox"/> Deed & Title Search
<input checked="" type="checkbox"/> Original					
<input type="checkbox"/> Altered					

FEATURE DESCRIPTION & STATEMENT OF INTEGRITY Feature 1 is the main house at the site.

It is the only standing structure remaining at the site. The roof is multi-gabled in an apparent cross pattern. Roof exhibits asphalt shingles. Beneath the gables are diamond-shaped wooden patterning above the windows. Windows are broken or taken out for most part. The porch on the northeastern end of the house has secondary of white, rectangular siding. This is only part of house with this siding. Overall the structure has fair to poor integrity. It continues to deteriorate rapidly as it is exposed to weather.

SIGNIFICANCE

☐ SIGNIFICANT

☒ NOT SIGNIFICANT

<input type="checkbox"/> Work of Master	<input type="checkbox"/> Visual Landmark	<input type="checkbox"/> Too new
<input type="checkbox"/> High Artistic Values	<input type="checkbox"/> Associated with significant event	<input checked="" type="checkbox"/> Lacking integrity
<input checked="" type="checkbox"/> Rep. of type, period, method of construction	<input type="checkbox"/> Associated with devel. of locality	<input checked="" type="checkbox"/> Not High Style
<input type="checkbox"/> Other	<input type="checkbox"/> Associated with significant person	<input type="checkbox"/> Other

JUSTIFICATION OF SIGNIFICANCE The feature is not designed by master and is

similar to homestead dwellings in the area. It could be considered representative of turn of the century homesteads in the region. The feature is in fair condition but continues to deteriorate.

Recorded by M. Floodman

Date 5/19/87

Field Code PE-86-DL-18

SITS NUMBER 32RY15

ACCESS From Devils Lake take Highway 2 to Grand Harbor. Continue one mile past town and turn north on county road. Proceed 10.25 - 10.5 miles and turn west on county road and proceed 2 miles (past Chain Lake church). Site lies north of road 1/2 mile west of Chain Lake church.

DESCRIPTION OF SITE Site consists of a homestead dated from Ca. 1890-1972 (see deed and title search on continuation page). The site consists of some ten defined features. Only the residential dwelling (Feature 1) still stands. All other features are torn down or destroyed. (See descriptions below and sketch map).

FEATURES Feature 1 - 11 x 8 meters standing house.

Feature 2 - 10x15 meters burnt to ground. Raised foundations of fieldstone covered by layer of cement. Possibly a barn or other outbuilding location.

Feature 3 - 4x5 meters. Fieldstone and cement foundation flat on the ground.

No superstructure is left. Lot of cement block is present-may have been cement block building.

SITE AREA 14884 (in meters) (cont)

OWNER'S NAME, ADDRESS, PHONE # Joel and Donna Storsteen

PROJECT TITLE Devils Lake Flood Control Project

REPORT TITLE _____

PROJECT SUPERVISOR M. Floodman

REPORT AUTHOR M. Floodman

STATEMENT OF SIGNIFICANCE AND INTEGRITY The site is typical of the farmsteads on the region. It is not architecturally unique, and was not designed by a master. Nor was the site occupied by historically important people. The site is in poor condition and continues to deteriorate. The site is not believed to be significant.

Item No.

Features (Continued from page 3)

Feature 4 - Oval depression 3 meters deep approximately 4x6 meters.

Had cement foundation now torn out.

Feature 5 - Collapsed wooden frame building. Outbuilding is 6x5 meters.

Half cylinder shape with tar paper roof.

Feature 6 - Fieldstone and cement foundation 10x8 meters.

Feature 7 - Depression 5 meters in diameter and 2 meters deep.

Feature 8 - Pebbly foundation outline, very poorly defined.

adjacent to Feature 7.

Feature 9 - Small wooden outhouse 2 meters x 2 meters.

Feature 10- Depression - probably old outhouse position now filled in.

Deed & Title Search:

Document	Transaction	Name	Date
Vol. 4:302	- Application #423, Homestead to Englebret Anderson		11/20/1890
PP3:139	- Doc #41, Homestead Certificate to Englebret Anderson		3/23/1891
Vol. 51:317	- Doc #108844, Admininstrators Deed to Paul Pederson		10/28/1944
Vol. 51:330	- Doc #108917, Warranty Deed to Paul & Marie Pederson		12/12/1944
Vol. 44:378	- Doc #113512, Indenture to John Whitnack		07/23/1947
Vol. 60:176	- Doc #123956, Indenture to Lyle Schlup		05/04/1953
Vol 71:285	- Warranty Deed to Albert & Evelyn Moen		09/28/1967
Vol 71:297	- Quit Claim Deed Albert & Evelyn Moen		09/28/1967
Vol 19:379	- Doc # 152857, Final Decree of Distribution		
	Given to Albert Moen		03/08/1970
Vol 21:631	- Contract for Deed to Joel & Donna Mae Sorensteen		11/09/1972

Recorded by M. FloodmanDate 5-19-87

32RY15
p.5

0 20 m

- ✖ + trees/windbreak
- ⊗ Depression
- Foundation outline
- Feature
- ↖ Cultivation Field edge

N

CULTIVATED

FIELD

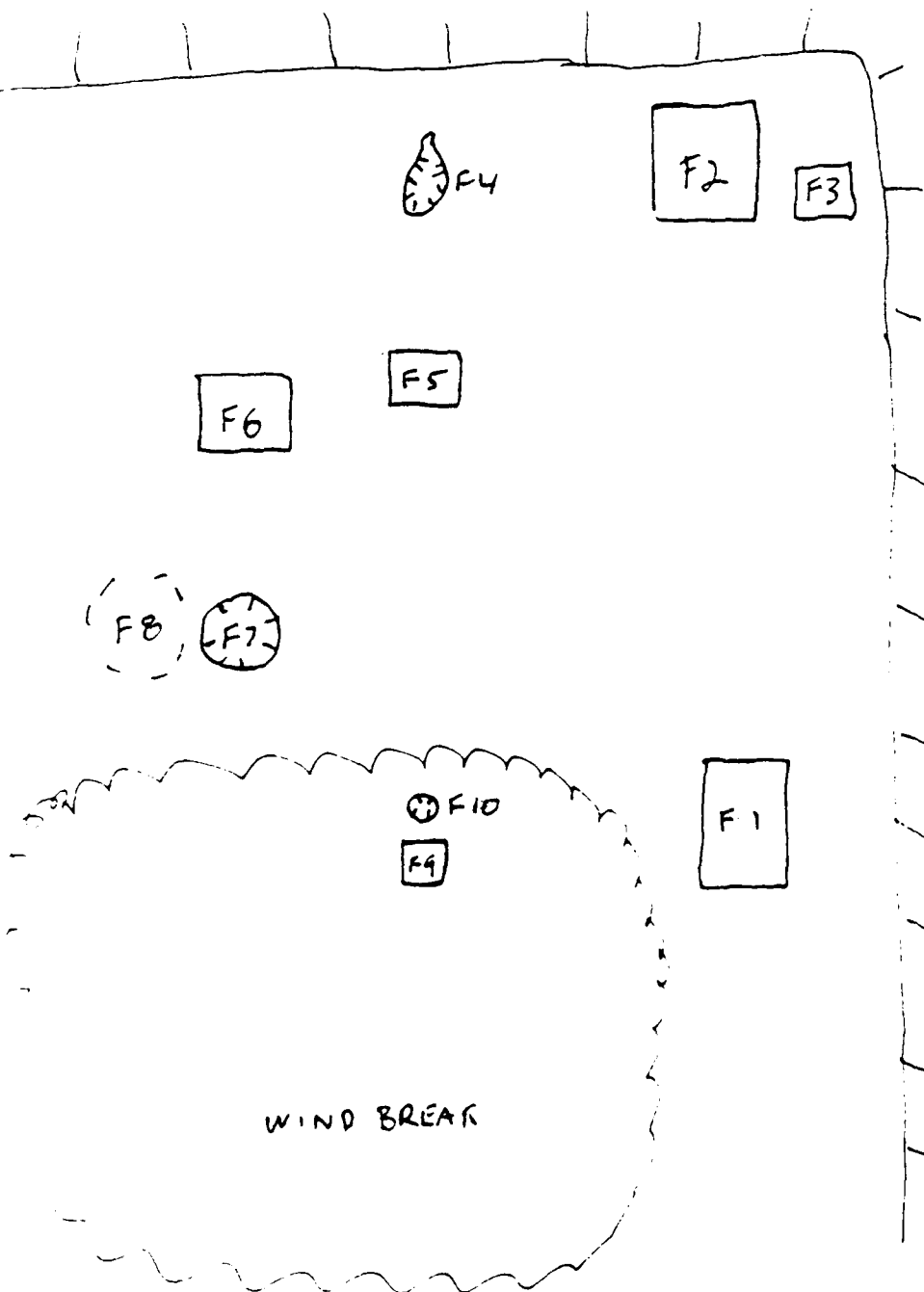
SWY4 SWY4
Section 18
T.156N. R.65W.
RAMSEY COUNTY, ND

CULTIVATED

FIELD

ROAD

COUNTY



Devils Lake Project
SW1SW1, Sec. 18, T.156N., R.65W.
Ramsey County, North Dakota

32RY15
p. 6



Feature #1 Looking Southwest

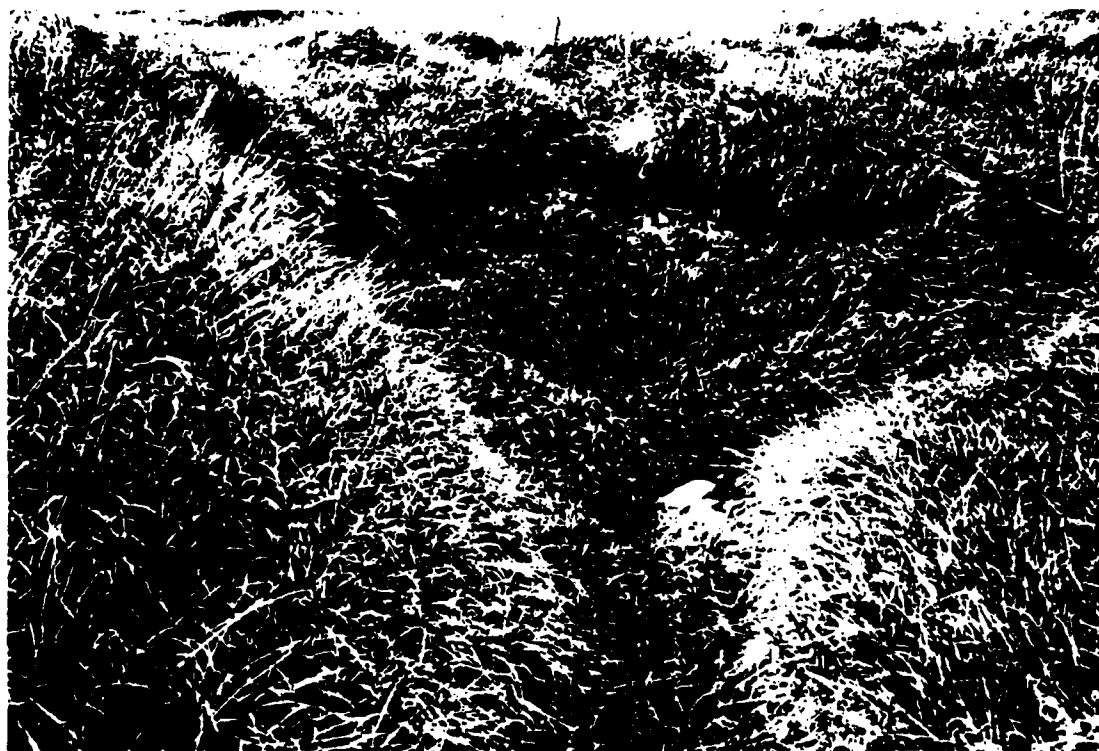


Feature #1 Looking Northeast

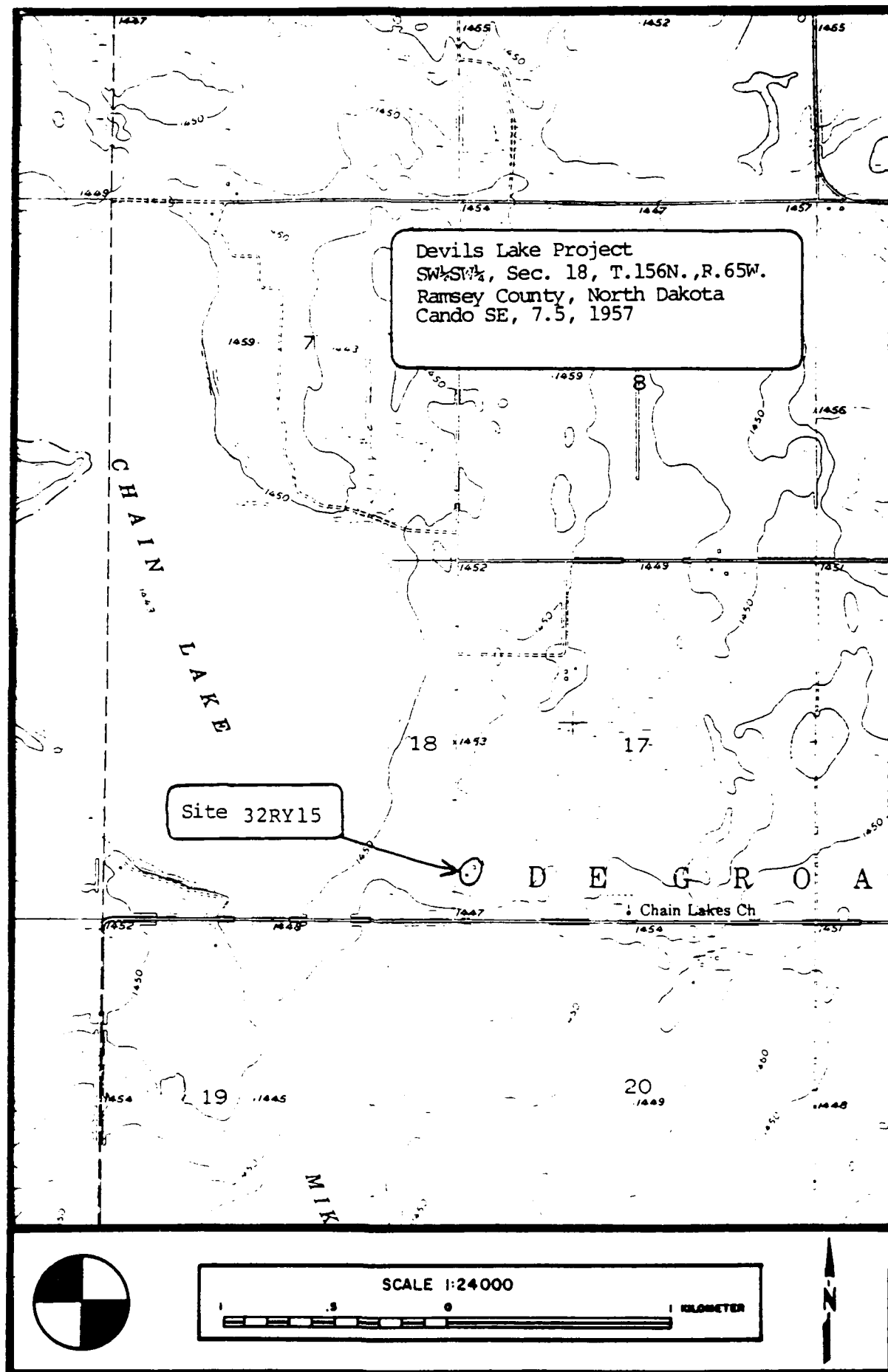
Devils Lake Project
SW 1/4 SW 1/4, Sec. 18, T.156N., R.65W.
Ramsey County, North Dakota
32RY15
p.7



Feature #2 Looking South



Feature #4 Looking South

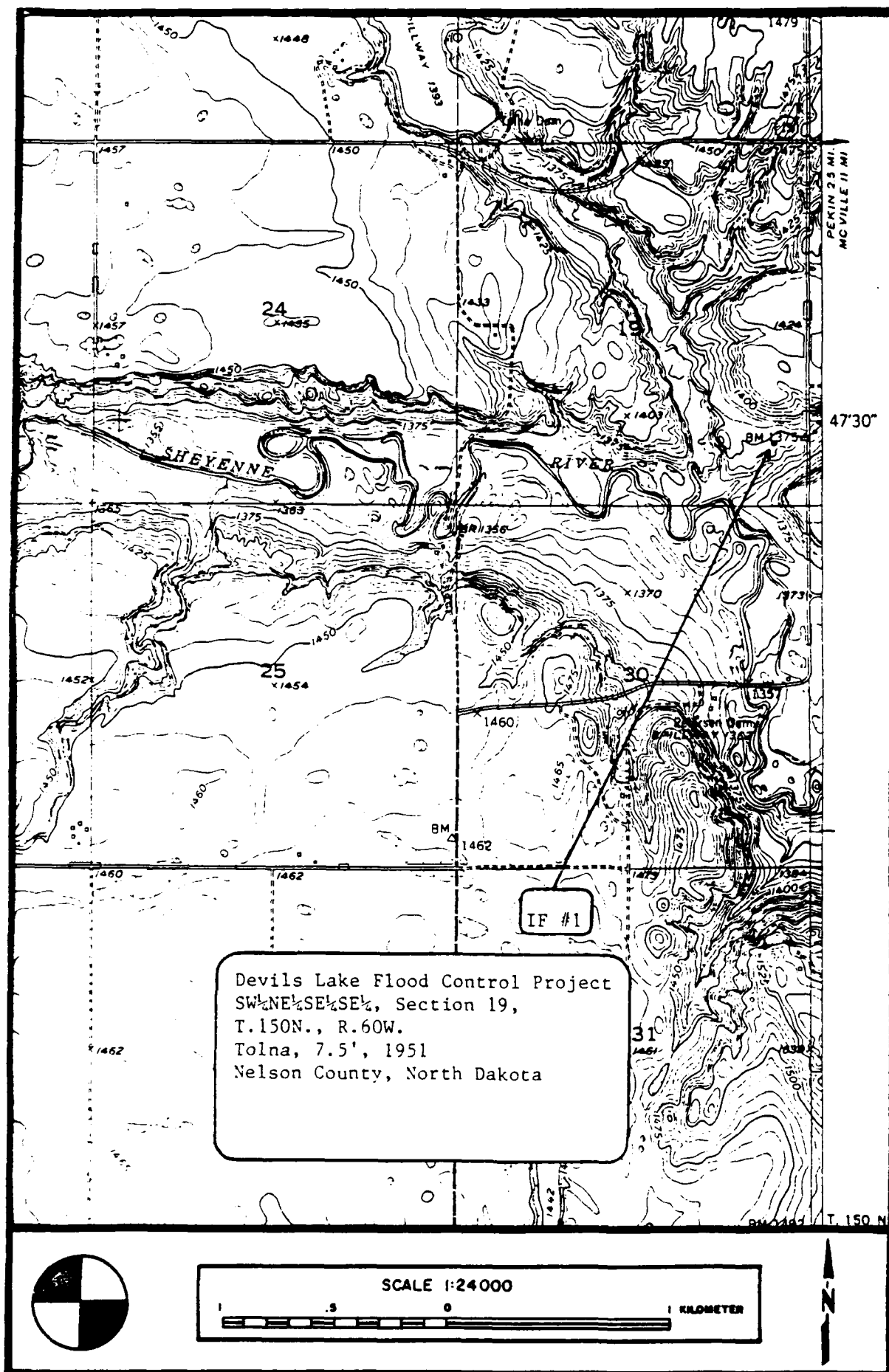


ISOLATED ARTIFACT RECORD

- 1) Field Number IF #1 2) Curation Number _____
- 3) Legal Location: T 150 N R 60 W _____ Sec. 1 9, 1/4 SW 1/4 NE 1/4 SE 1/4
- 4) County Nelson 5) USGS Map Reference Tolna, 7.5', 1951
- 6) Artifact Owner (Landowner): Federal Agency/District _____
State Agency/District _____ Private/Name and Address _____
- 7) Collected? / / No / X / Yes Repository NDSHS Museum
- 8) Name of Recorder Mervin G. Floodman Date 10-13-86
Company/Institution Powers Elevation, Inc.



- 9) Sketch or Photo: Scale 1:1
- 10) Artifact Description (Dimensions-materials-use/function-time period)
17.9 mm x 16.1 mm x 6.2 mm, 2.7 grams, Knife River flint. The artifact is a small sized plano-convex endscraper which is modified by steep distal retouch along both lateral and the distal end from a tertiary flake blank. The distal retouched portion is along a hinged termination fracture. The artifact exhibits extensive use-wear in the form of step-flaking. The time period is unknown.
- 11) Environmental Location (Topography-vegetation-soils-slope-hydrology)
The artifact was recovered in the rut of a two wheel track trail. No other artifacts were found in the area. The location of the artifact is on a flat to gently south sloping terrace about an intermittent stream tributary of the Sheyenne River. The artifact was found on the north side of the stream just west of a low drainage swale. The surrounding area is heavily grassed with dense stands of buckbrush and sagebrush. Visibility is limited. Soils are shallow clay loams with substantial colluvial deposits and erosion.
- 12) Attach USGS Map Showing Artifact Location

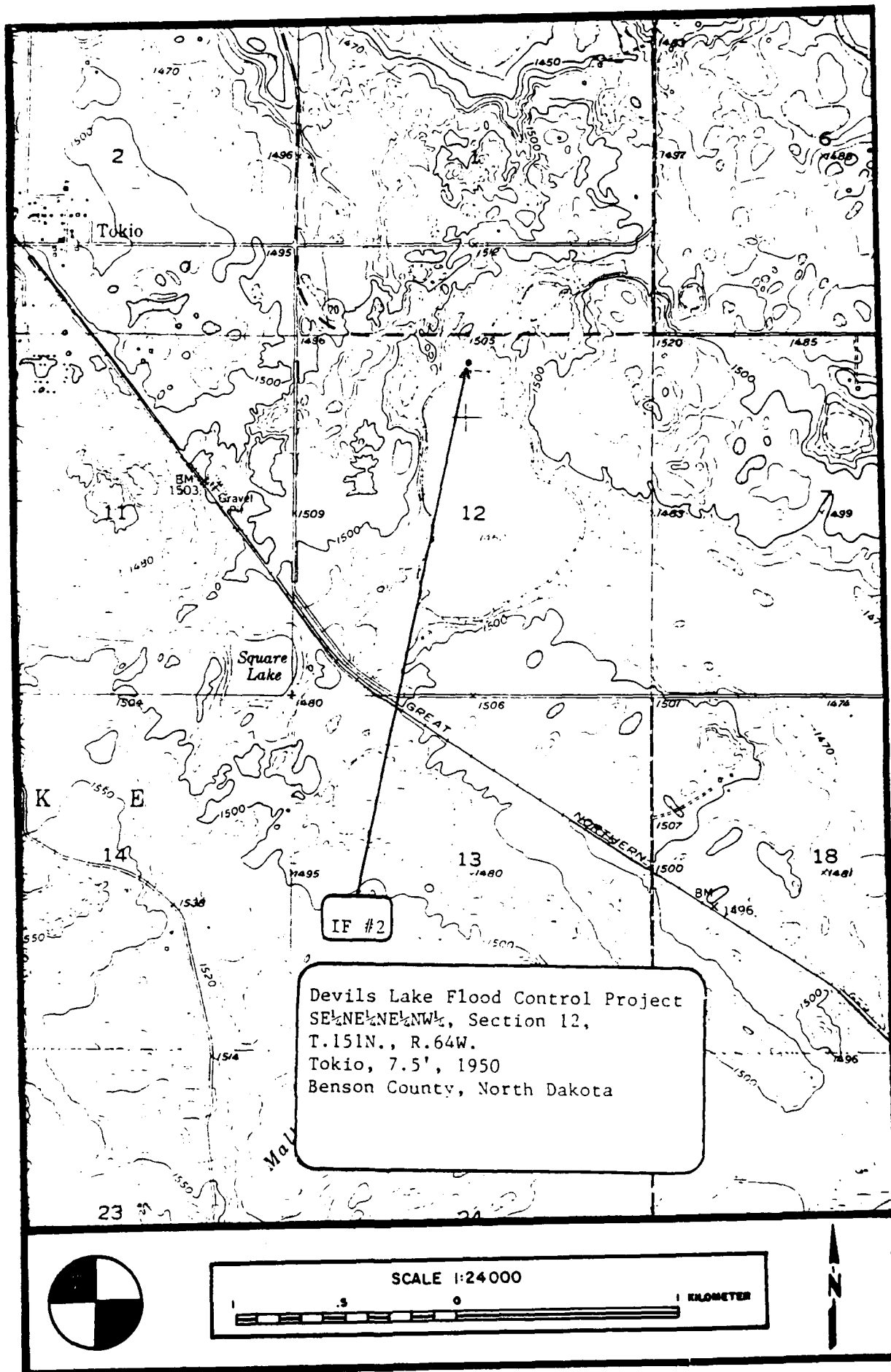


ISOLATED ARTIFACT RECORD

- 1) Field Number IF #2 2) Curation Number _____
3) Legal Location: T 151 N R 64 W . . . Sec. 1 2, 1/4 SE 1/4 NE 1/4 NE 1/4 NW 1/4
4) County Benson 5) USGS Map Reference Tokio, 7.5', 1950
6) Artifact Owner (Landowner): Federal Agency/District _____
State Agency/District _____ Private/Name and Address _____
7) Collected? / / No / X / Yes Repository NDSHS Museum
8) Name of Recorder Mervin G. Floodman Date 10-16-86
Company/Institution Powers Elevation, Inc.

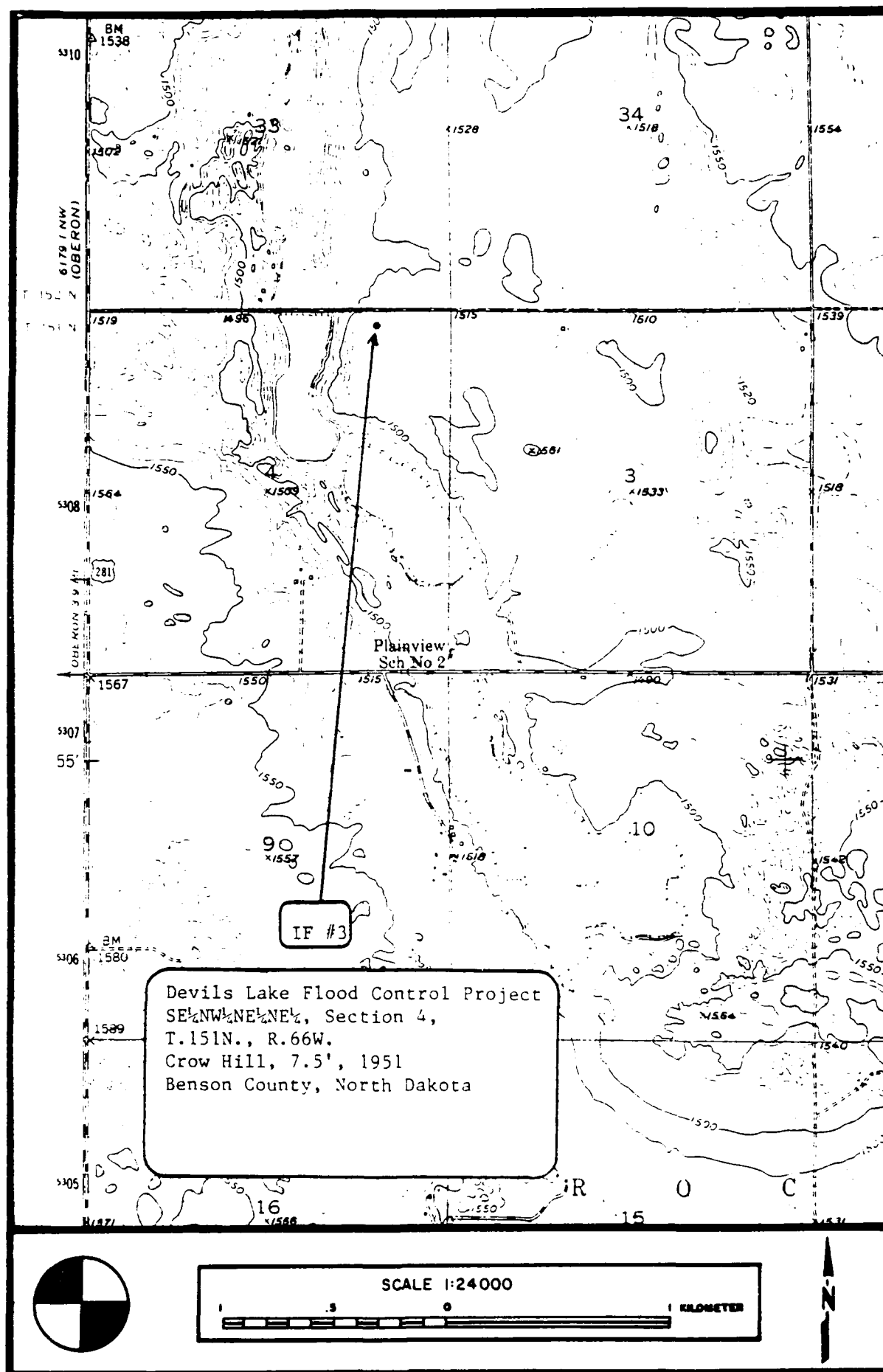
← retouched

- 9) Sketch or Photo: Scale 1:1
- 10) Artifact Description (Dimensions-materials-use/function-time period)
23.8 mm x 29.0 mm x 10.1 mm, 9.2 grams. Variegated tan chert. The artifact consists of a tertiary flake fragment bifacially modified along one lateral edge. The retouch is by percussion, not pressure, flaking. The opposite edge is unaltered to a bifacial edge. The piece is not time diagnostic.
- 11) Environmental Location (Topography-vegetation-soils-slope-hydrology)
The artifact was located in an open, fallow field on the beach adjacent to the north edge of Graves Lake. The soils are sandy and pebbly and are of lacustrine deposition. Extensive modern garbage litters the area. No other artifacts were found in the fallow field. The beach is flat with a mild drop to the lake shore line.
- 12) Attach USGS Map Showing Artifact Location



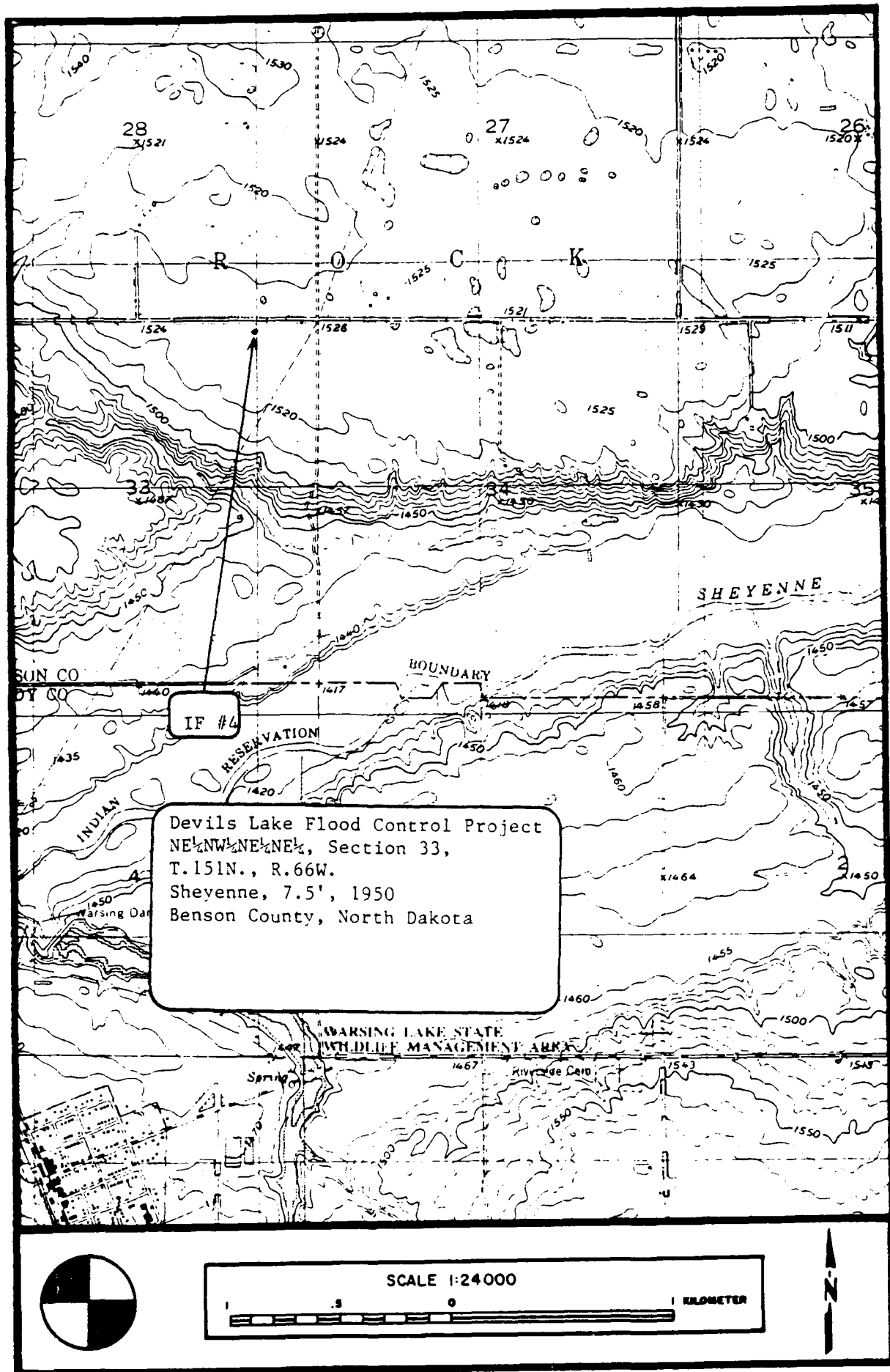
ISOLATED ARTIFACT RECORD

- 1) Field Number IF #3 2) Curation Number _____
- 3) Legal Location: T 151 N R 66 W _____ Sec. 0 4, 1/4 SE 1/4 NW 1/4 NE 1/4 NE 1/4
- 4) County Benson 5) USGS Map Reference Crow Hill, 7.5', 1951
- 6) Artifact Owner (Landowner): Federal Agency/District _____
State Agency/District _____ Private/Name and Address _____
- 7) Collected? / X / No / ___ / Yes Repository _____
- 8) Name of Recorder Mervin G. Floodman Date 10-21-86
Company/Institution Powers Elevation, Inc.
- 9) Sketch or Photo: Scale _____
- 10) Artifact Description (Dimensions-materials-use/function-time period)
The artifact consists of a cobble-sized core of white chert. The cobble has been decorticated on three sides. Several smaller flakes are removed for platform preparation, then the artifact was discarded or lost.
- 11) Environmental Location (Topography-vegetation-soils-slope-hydrology)
The artifact was found in an open, fallow field. The field is located on a hill side adjacent to the east side of a large outwash channel. The channel is dammed to form several large ponds or lakes. No other materials were visible in the field. Soils are a dark brown loam with numerous glacial cobbles and gravels. The field was fallow and no vegetation was present.
- 12) Attach USGS Map Showing Artifact Location



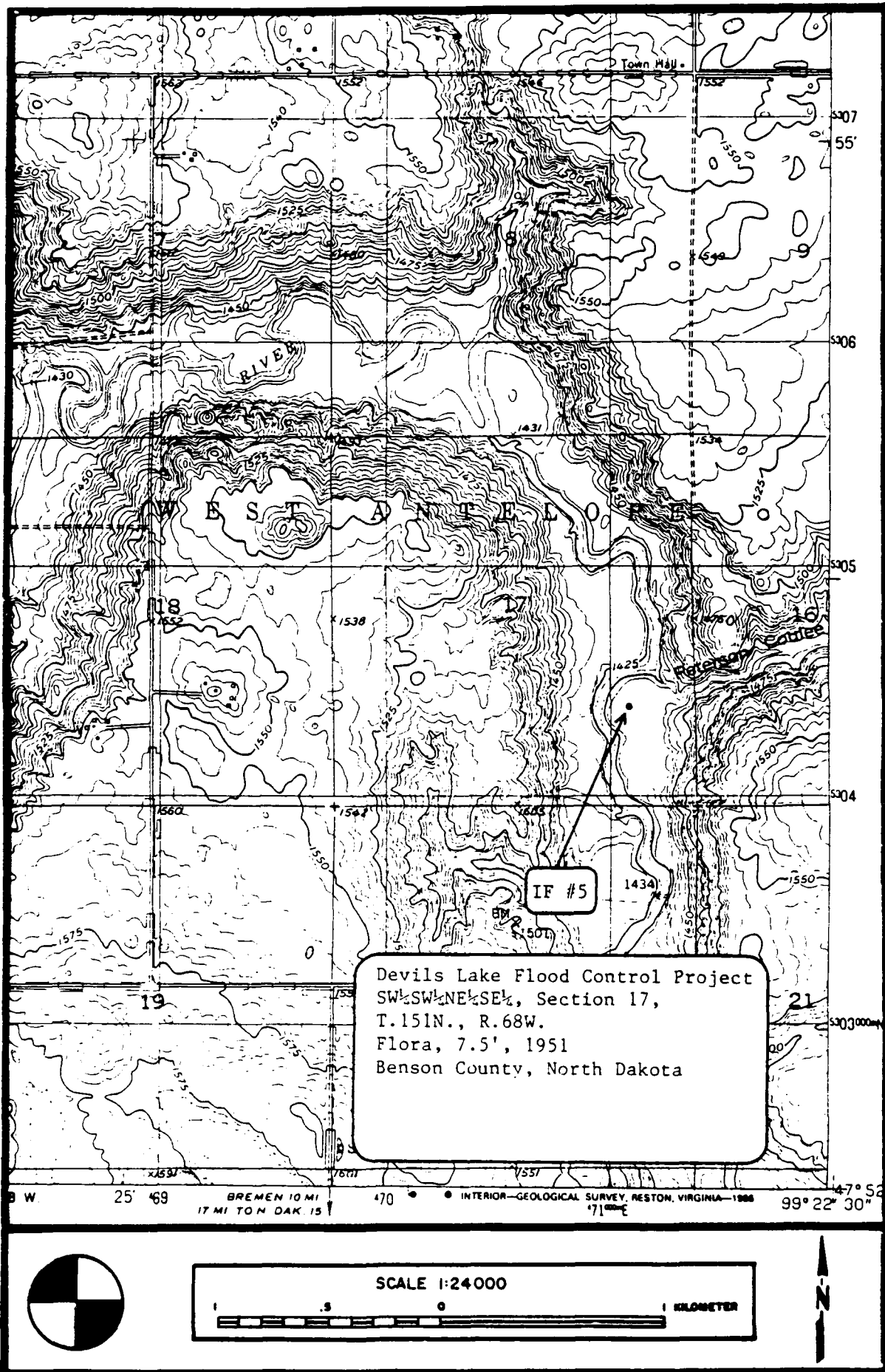
ISOLATED ARTIFACT RECORD

- 1) Field Number IF #4 2) Curation Number _____
- 3) Legal Location: T 151 N R 66 W . . . Sec. 33 , 1¹/₄ NE¹/₄ NW¹/₄ NE¹/₄ NE¹/₄
- 4) County Benson 5) USGS Map Reference Sheyenne, 7.5', 1950
- 6) Artifact Owner (Landowner): Federal Agency/District _____
State Agency/District _____ Private/Name and Address _____
- 7) Collected? ☒ / No ☐ / Yes _____ Repository _____
- 8) Name of Recorder Mervin G. Floodman Date 10-22-86
Company/Institution Powers Elevation, Inc.
- 9) Sketch or Photo: Scale _____
- 10) Artifact Description (Dimensions-materials-use/function-time period)
The artifact consists of a white quartz secondary flake. The material is very coarse-grained. The edges are thick and may be utilized for scraping or some similar function. Utilization is difficult to discern due to the coarse grain texture of the raw material.
- 11) Environmental Location (Topography-vegetation-soils-slope-hydrology)
The isolate was found in a cultivated, fallow field. The geomorphic unit is lacustrine deposition. The area is a small, ice-blocked lake formed at the terminus of a melting glacier. The lake formed on the margin along the north edge of the Sheyenne River valley. Soils are very sandy and fine. No vegetation was in the fallow field.
- 12) Attach USGS Map Showing Artifact Location



ISOLATED ARTIFACT RECORD

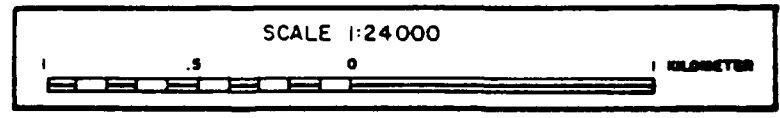
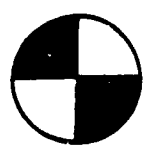
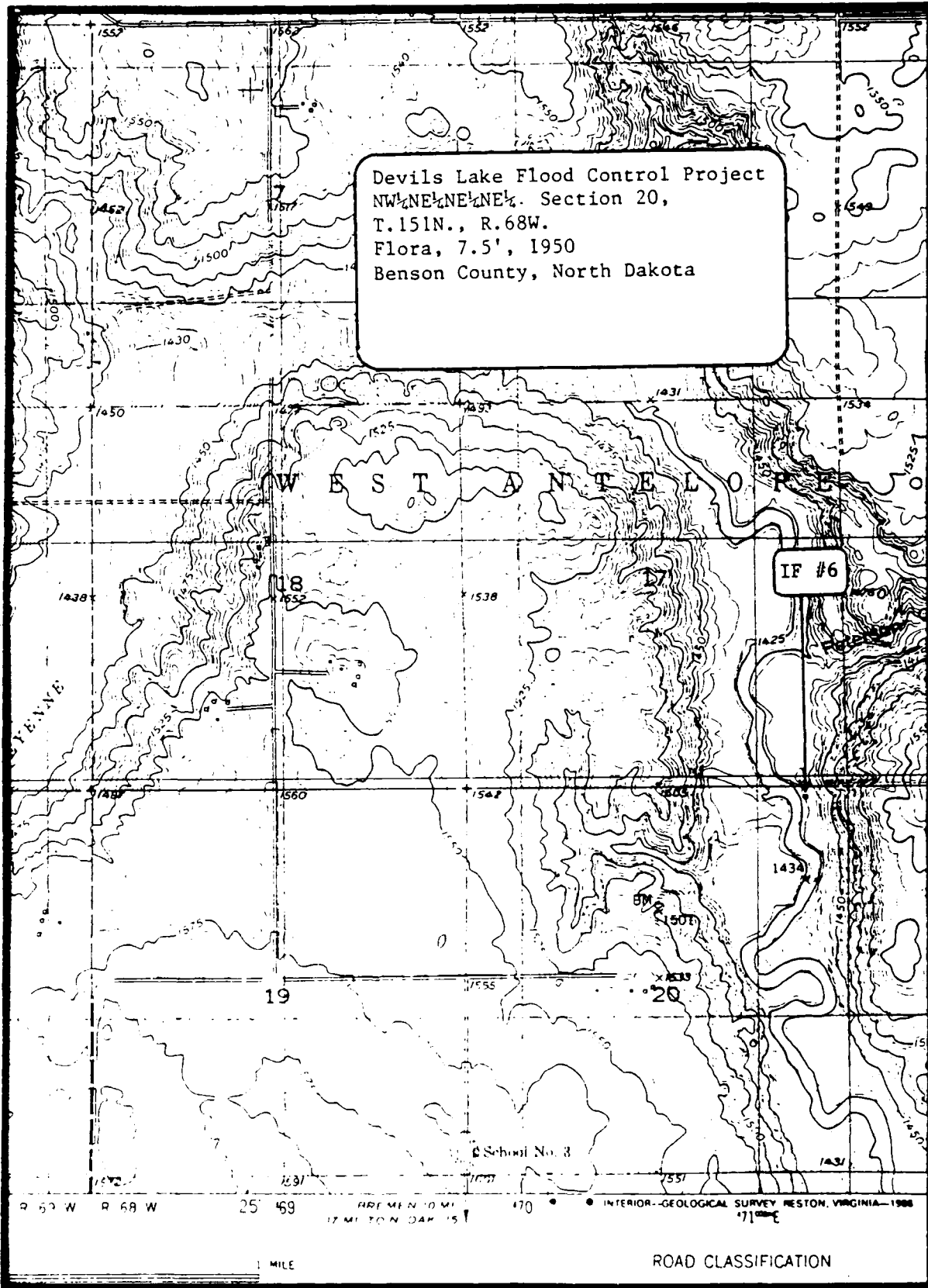
- 1) Field Number IF #5 2) Curation Number _____
- 3) Legal Location: T 151 N R 68 W . . . Sec. 1 7, 1/4 SW 1/4 SW 1/4 NE 1/4 SE 1/4
- 4) County Benson 5) USGS Map Reference Flora, 7.5', 1951
- 6) Artifact Owner (Landowner): Federal Agency/District _____
State Agency/District _____ Private/Name and Address _____
- 7) Collected? / X / No / / Yes Repository _____
- 8) Name of Recorder Mervin G. Floodman Date 10-22-86
Company/Institution Powers Elevation, Inc.
- 9) Sketch or Photo: Scale _____
- 10) Artifact Description (Dimensions-materials-use/function-time period)
The isolate consists of a secondary flake of Knife River flint. The artifact exhibits no utilization or retouch and is classified as a waste flake.
- 11) Environmental Location (Topography-vegetation-soils-slope-hydrology)
The isolate is found within a cultivated wheatfield on a terrace above the Sheyenne River. The soils are river bottom alluvium. The old terrace of the river lies just north and west of the isolate above the modern river coarse. No other artifacts were found in the area. Vegetation consists of immature wheat plants. IF #6, IF #7 and site 32BE21 are just to the south of this IF #5.
- 12) Attach USGS Map Showing Artifact Location



ISOLATED ARTIFACT RECORD

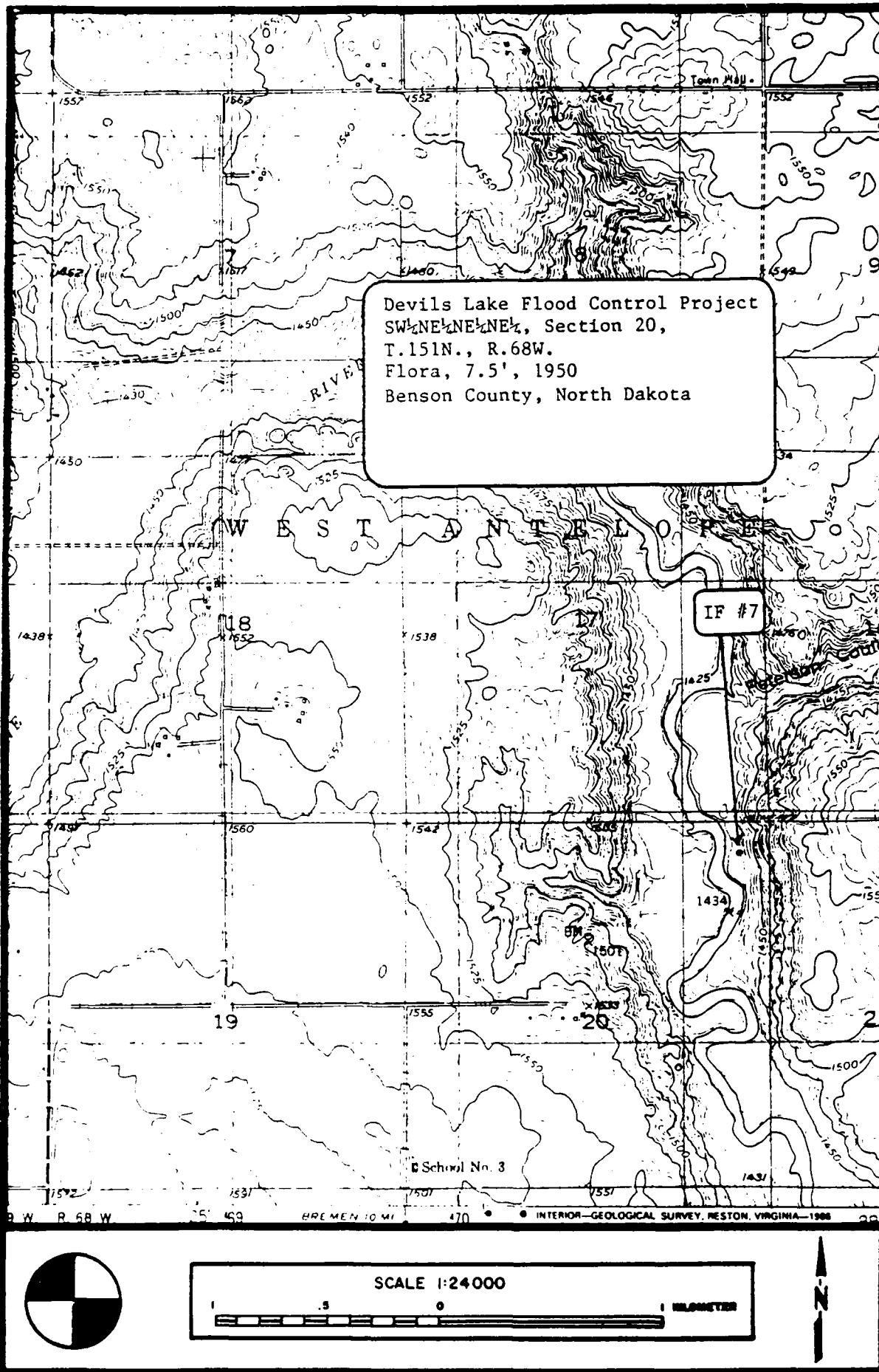
- 1) Field Number IF #6 2) Curation Number _____
- 3) Legal Location: T 151 N R 68 W . . . Sec. 20, 1/4 NW 1/4 NE 1/4 NE 1/4 NE 1/4
- 4) County Benson 5) USGS Map Reference Flora, 7.5', 1950
- 6) Artifact Owner (Landowner): Federal Agency/District _____
State Agency/District _____ Private/Name and Address _____
- 7) Collected? / / No / X / Yes Repository _____
- 8) Name of Recorder Mervin G. Floodman Date 10-22-86
Company/Institution Powers Elevation, Inc.
- 9) Sketch or Photo: Scale _____
- 10) Artifact Description (Dimensions-materials-use/function-time period)
- 11) Environmental Location (Topography-vegetation-soils-slope-hydrology)
- The isolate was located on a terrace immediately above the modern course of the Shevenne River. The isolate is in a cultivated field found on the river bottom alluvium. Vegetation consists of sparse immature wheat plants. The isolate is located in the vicinity of IF #5, IF #7 and Site 32BE21 .
- 12) Attach USGS Map Showing Artifact Location

Devils Lake Flood Control Project
NW 1/4, NE 1/4, NE 1/4, NE 1/4, Section 20,
T. 151N., R. 68W.
Flora, 7.5', 1950
Benson County, North Dakota



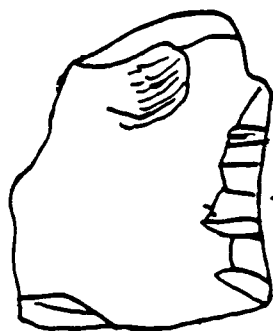
ISOLATED ARTIFACT RECORD

- 1) Field Number IF #7 2) Curation Number _____
- 3) Legal Location: T 151 N R 68 W ____ Sec. 20, 1/4 SW 1/4 NE 1/4 NE 1/4 NE 1/4
- 4) County Benson 5) USGS Map Reference Flora, 7.5', 1950
- 6) Artifact Owner (Landowner): Federal Agency/District _____
State Agency/District _____ Private/Name and Address _____
- 7) Collected? / / No / X / Yes Repository _____
- 8) Name of Recorder Mervin G. Floodman Date 10-22-86
Company/Institution Powers Elevation, Inc.
- 9) Sketch or Photo: Scale _____
- 10) Artifact Description (Dimensions-materials-use/function-time period)
123 mm x 101 mm x 94 mm, granite. The isolate consists of a fully grooved stone maul. The artifact retains much of its original cobble shape. The groove is pecked into the stone to a depth of three to eight millimeters and 20 to 30 mm wide. The groove is not ground. Grinding is evident on several surfaces of the maul, but the entire artifact is not ground. The working end of the maul is shattered and broken away. The maul is most likely Late Prehistoric in age.
- 11) Environmental Location (Topography-vegetation-soils-slope-hydrology)
The maul is located in a cultivated field in the alluvial bottoms of the Sheyenne River. The field is located on a terrace remnant. The maul is associated with IF #5, IF #6 and site 32BE21 in the same field. The field is in a small, immature wheat.
- 12) Attach USGS Map Showing Artifact Location



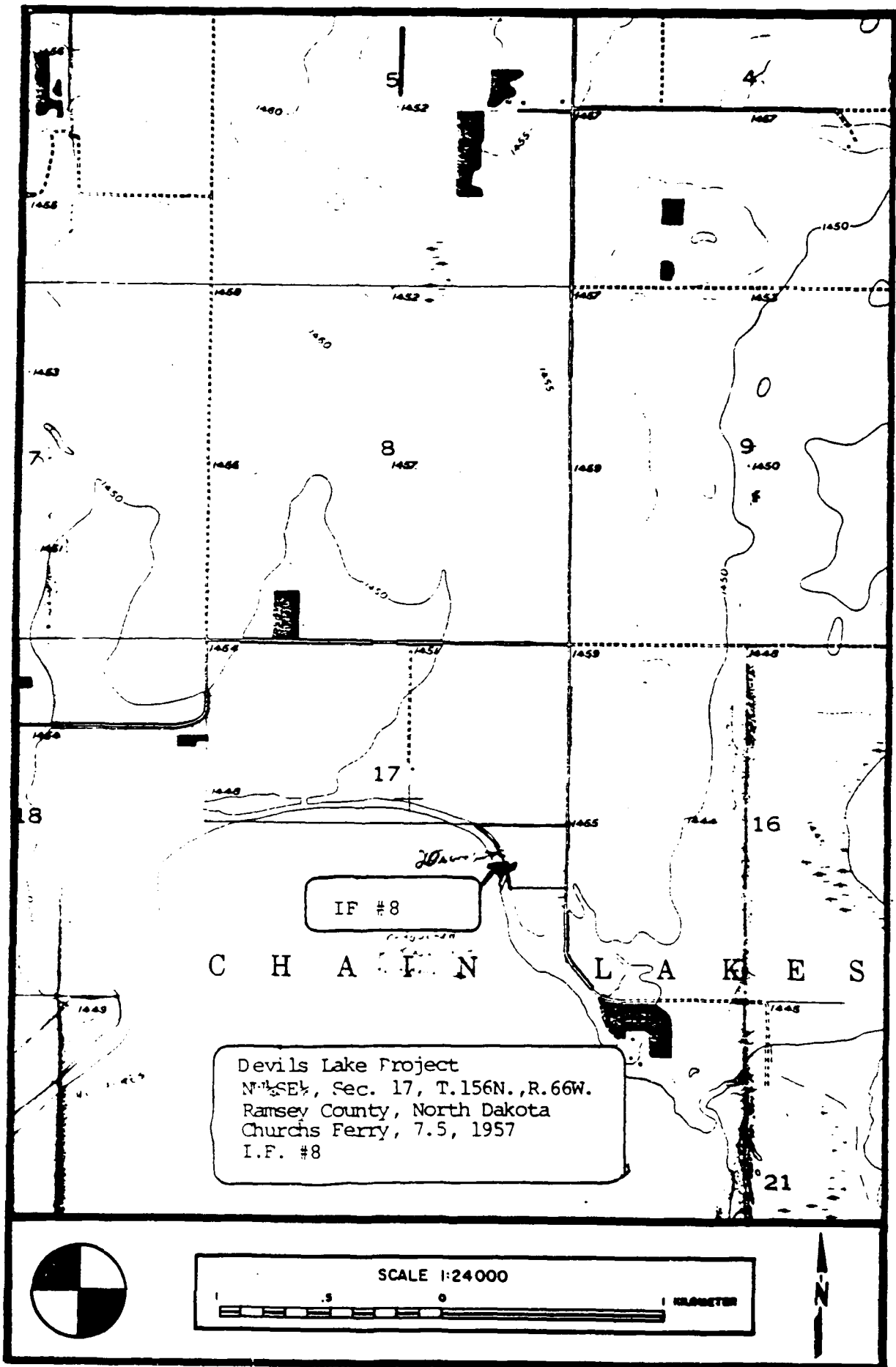
ISOLATED ARTIFACT RECORD

- 1) Field Number IF #8 2) Curation Number _____
3) Legal Location: T 156 N R 66 W . . . Sec. 1 7, X $\frac{1}{2}$ SE $\frac{1}{2}$ NW $\frac{1}{2}$ NE $\frac{1}{2}$ SE $\frac{1}{2}$
4) County Ramsey 5) USGS Map Reference Church's Ferry 7.5' 1957
6) Artifact Owner (Landowner): Federal Agency/District _____
State Agency/District _____ Private/Name and Address _____
7) Collected? / X / No / / Yes Repository _____
8) Name of Recorder Mervin Floodman Date 5/18/87
Company/Institution Powers Elevation, Inc.



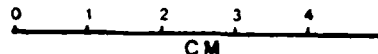
Retouch on Ventral Face

- 9) Sketch or Photo: Scale 1:1
10) Artifact Description (Dimensions-materials-use/function-time period)
42X37X9 millimeters
Retouched and utilized tertiary flake of pinkish quartzite. The artifact exhibits retouch along one lateral edge along the ventral surface. The edge is rounded suggesting heavy utilization.
11) Environmental Location (Topography-vegetation-soils-slope-hydrology)
The isolate was located in a cultivated field along the northeastern edge of Lake Irvine. The artifact appears to be on second or third strandline above the modern lake level. No other cultural materials were associated in the field of immature wheat. Visibility was excellent.
12) Attach USGS Map Showing Artifact Location

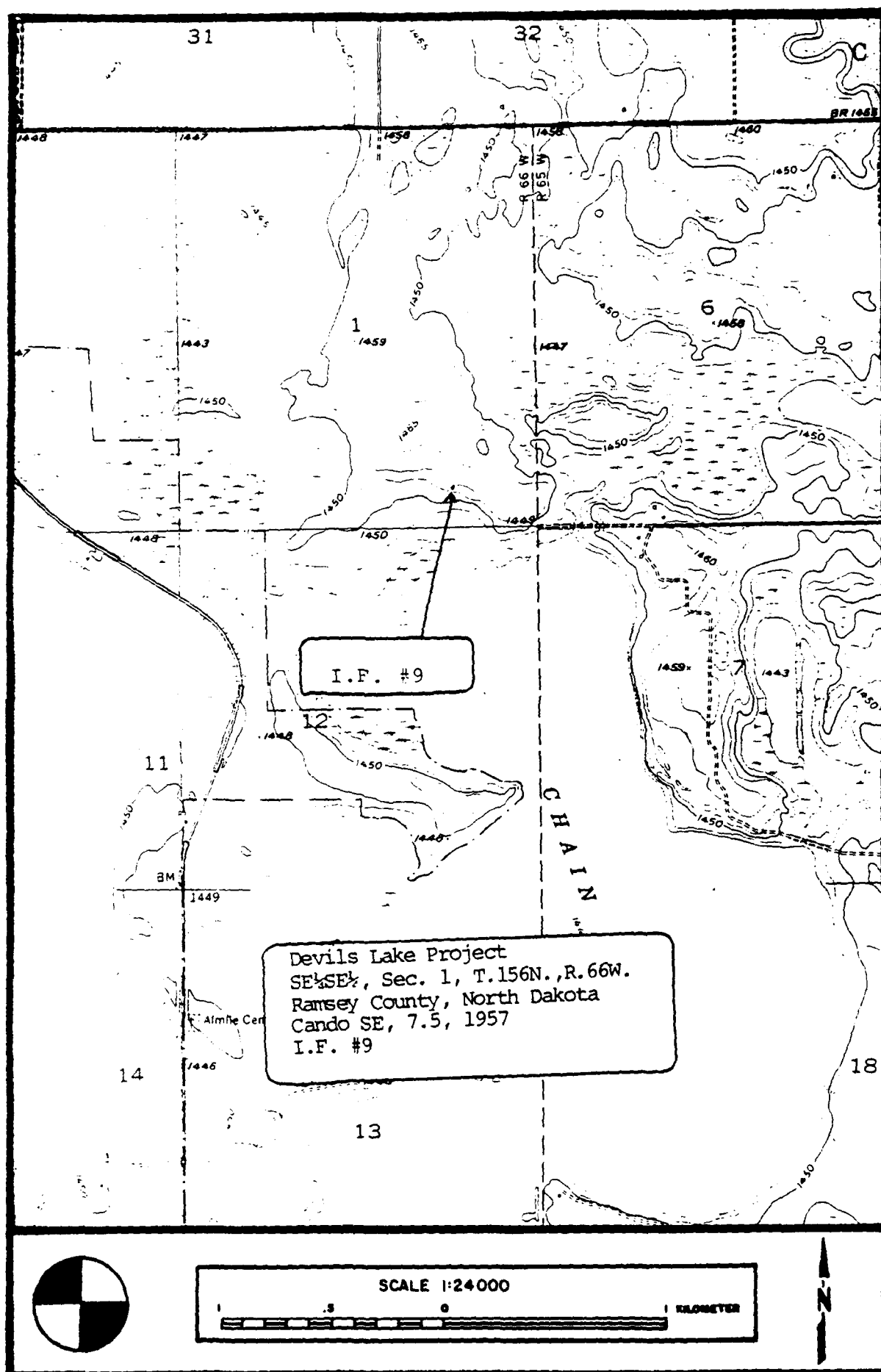


ISOLATED ARTIFACT RECORD

- 1) Field Number IF #9 2) Curation Number _____
3) Legal Location: T 1 5 6N R 6 6W. _____ Sec. 0 1, X 1/4NW 1/4SW 1/4SE 1/4SE 1/4
4) County Ramsey 5) USGS Map Reference Cando SE 7.5 1957
6) Artifact Owner (Landowner): Federal Agency/District _____
State Agency/District _____ Private/Name and Address _____
7) Collected? / / No / X / Yes Repository NDSHS Museum Bismark ND
8) Name of Recorder M. Floodman Date 5/18/87
Company/Institution Powers Elevation Inc.

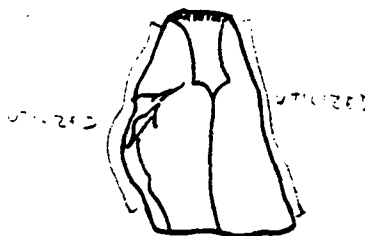


- 9) Sketch or Photo: Scale 1:1
- 10) Artifact Description (Dimensions-materials-use/function-time period)
34.1 x 19.9 millimeters
The isolate is a complete corner-notched projectile point of tan chert. The point is typical of late woodland assemblages. The point is finely pressure flaked over both surfaces. The corner-notches are deep and well defined. The base is excurvate in a shape and unground.
- 11) Environmental Location (Topography-vegetation-soils-slope-hydrology)
The point was located in a cultivated field of immature wheat. The topography consists of a standline above the current level of Chain Lake off the north edge of the lake. No other materials were associated. Soils were a gravelly brown loam.
- 12) Attach USGS Map Showing Artifact Location



ISOLATED ARTIFACT RECORD

- 1) Field Number IF #10 2) Curation Number _____
3) Legal Location: T 156N R 66W. _____ Sec. 01, 1/4 center SE SE
4) County Ramsey 5) USGS Map Reference _____
6) Artifact Owner (Landowner): Federal Agency/District _____
State Agency/District _____ Private/Name and Address _____
7) Collected? / X / No / ___ / Yes Repository _____
8) Name of Recorder M. Floodman Date 5/18/87
Company/Institution Powers Elevation Inc.



- 9) Sketch or Photo: Scale 1:1
10) Artifact Description (Dimensions-materials-use/function-time period)

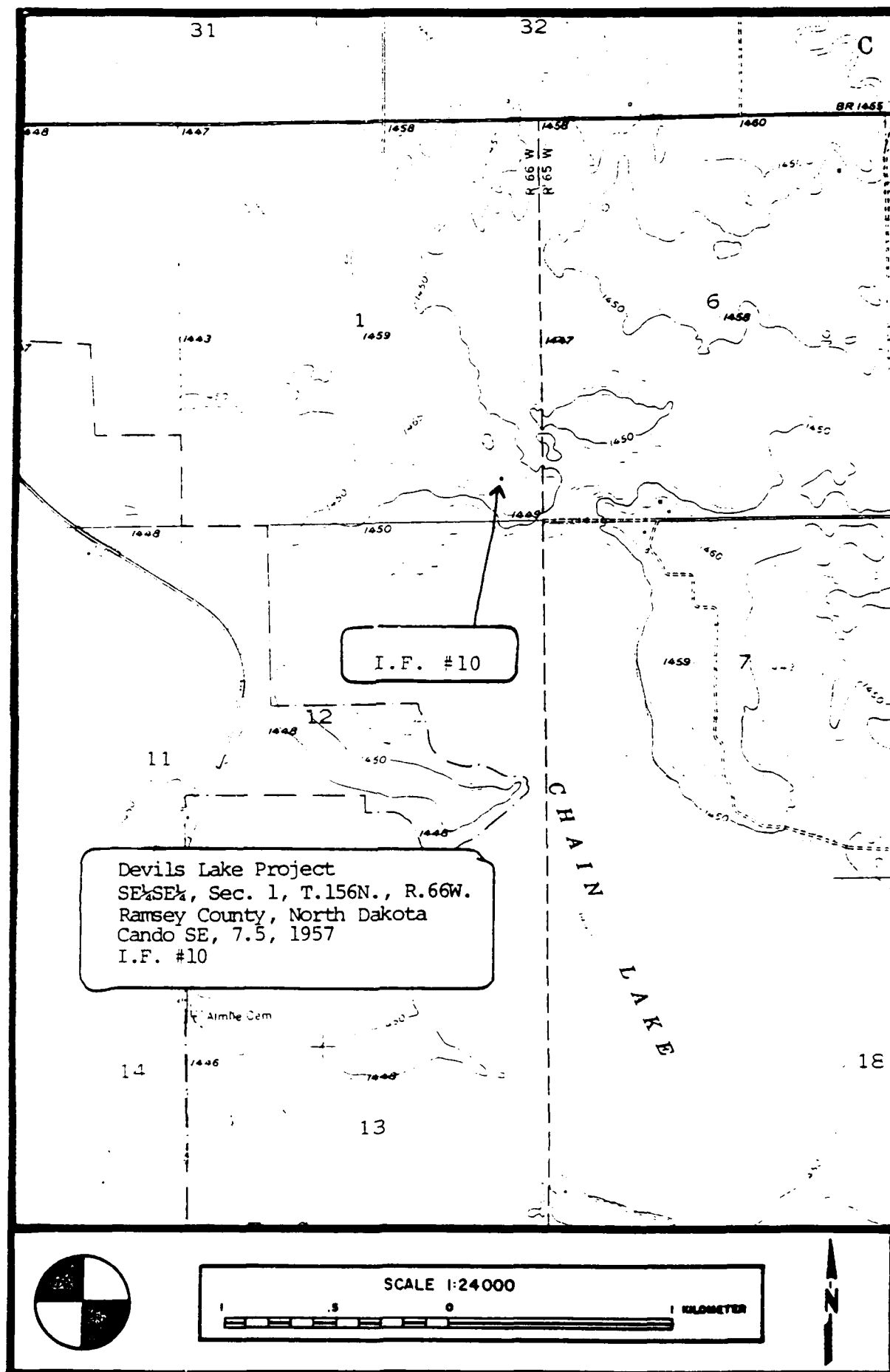
30 x 19 x 3 millimeters

Isolate consists of a utilized tertiary flake of white chert. The artifact is utilized along both lateral edges. No evidence of retouch is present. It is not temporally diagnostic.

- 11) Environmental Location (Topography-vegetation-soils-slope-hydrology)

The isolate was located in a cultivated field of immature wheat. The topography is the eastern edge of a slightly higher rise or hill above the north edge of Chain Lake. The artifact was isolated on the higher area above the strandlines of the lake. Soils are gravelly grown loam.

- 12) Attach USGS Map Showing Artifact Location

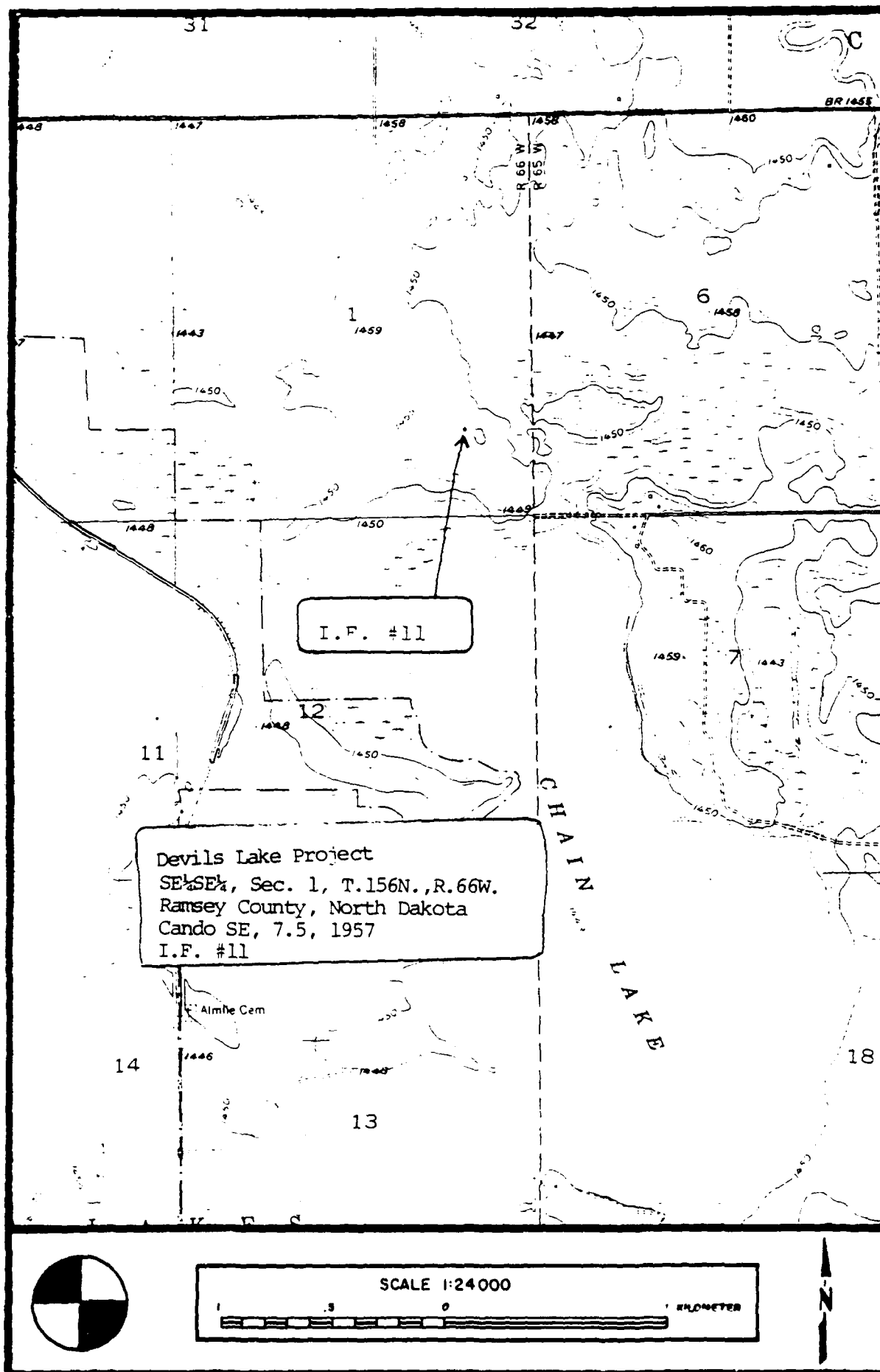


ISOLATED ARTIFACT RECORD

- 1) Field Number IF #11 2) Curation Number _____
3) Legal Location: T 1 S 6N R 66W _____ Sec. 0 1, X 1 NW1/NW1/SE1/SE1/
4) County Ramsey 5) USGS Map Reference Cando SE 7.5' 1957
6) Artifact Owner (Landowner): Federal Agency/District _____
State Agency/District _____ Private/Name and Address _____
7) Collected? / X / No / / Yes Repository _____
8) Name of Recorder M. Floodman Date 5/18/87
Company/Institution Powers Elevation Inc.

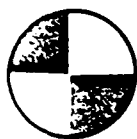


- 9) Sketch or Photo: Scale 1:1
- 10) Artifact Description (Dimensions-materials-use/function-time period)
21 x 13 x 6 and 18 x 12 x 4 millimeters
Isolate consists of one secondary flake of KRF and one tertiary flake of KRF.
Both are un-retouched and un-utilized. They are not temporally diagnostic.
- 11) Environmental Location (Topography-vegetation-soils-slope-hydrology)
Isolate was located in a cultivated field of immature wheat. The flakes were located about 1 meter apart on a low area above a seasonal pothole. They are on west edge of the pothole. Visibility was excellent and no other artifacts were associated. Soils are a grown, gravelly loam.
- 12) Attach USGS Map Showing Artifact Location



APPENDIX G:

Personnel Vitae



Powers Elevation Co., Inc.

P.O. Box 440889, Aurora, CO 80044
Phone 303-321-2217
Toll Free 1-800-824-2550
FAX 303-321-2217

MERVIN G. FLOODMAN

VITA

PRESENT PROFESSIONAL STATUS

District Archaeologist - Williston/Dickinson,
North Dakota District Archaeology Department,
Powers Elevation Co., Inc. District Telephone
numbers (701) 774-0679; (701) 572-3608.

EDUCATION

B.A., Anthropology and History, 1975, Saint
Cloud State University.

M.A., Anthropology, 1981, University of Northern
Colorado.

PROFESSIONAL EXPERIENCE

1981 - Present

District Archaeologist - Williston, North Dakota
District Office, Powers Elevation.

1980 - 1981

Field Archaeologist - Williston, North Dakota
District Office, Powers Elevation.

1980

Field Assistant - Archaeological Services, Grand
Junction, Colorado.

FIELD WORK

1981 - 1986

As Powers Elevation District Archaeologist
served as Lead Field Investigator for over 500
cultural resources jobs in Montana, South
Dakota, and North Dakota.

1986

Principal Investigator and Project Archaeologist
on the cultural resources inventory of the
Sheyenne River Flood Control Project, Cass
County, North Dakota, by Powers Elevation for
the U.S. Army Corps of Engineers, St. Paul
District.

1986

Principal Investigator and Project Archaeologist
on the cultural resources inventory of the Neche
Flood Control Project, Pembina County, North
Dakota, by Powers Elevation for the U.S. Army
Corps of Engineers, St. Paul District.

1986

Project Archaeologist on the cultural resources
inventory of the Gibson Dam to Choteau
transmission line, Lewis and Clark and Teton
Counties, Montana, by Powers Elevation for
Mitex, Inc.

FIELD WORK, (CONTINUED)

- 1985-1986 Principal Investigator and Project Archaeologist on the survey of the Fort Berthold Tribes 1-13 well pad and access, site testing at 32MZ748, and monitoring of construction, Fort Berthold Indian Reservation, McKenzie County, North Dakota, by Powers Elevation for E.P. Operating Company.
- 1985 Principal Investigator and Project Archaeologist on the archaeological testing program at site 32MZ721, Silurian Unit 40-1 well location, McKenzie County, North Dakota, by Powers Elevation for Texaco, Inc.
- 1985 Principal Investigator and Project Archaeologist on the archaeological test excavations at site 32MZ727, Silurian Unit 45-1 well location, McKenzie County, North Dakota, by Powers Elevation for Texaco, Inc.
- 1984 Principal Investigator and Project Archaeologist on archaeological test excavations at sites 32MZ173 and 32MZ233, McKenzie County, North Dakota, by Powers Elevation for Texaco, Inc.
- 1983 - 1984 Project Archaeologist on the archaeological testing program on the Upper Souris River, North Dakota, by Powers Elevation for the U.S. Army Corps of Engineers, St. Paul District.
- 1983 Principal Investigator and Project Archaeologist on the survey of the McKenzie County Gathering System, North Dakota, by Powers Elevation for Getty Trading and Transportation Company.
- 1983 Principal Investigator and Project Archaeologist on the Charlson Oil Field Block Surveys, McKenzie County, North Dakota, by Powers Elevation for Texaco, Inc.
- 1983 Principal Investigator and Project Archaeologist on the archaeological test excavations at sites 32MZ46 and 32MZ685, McKenzie County, North Dakota, by Powers Elevation for Tom Brown, Inc.

FIELD WORK, (CONTINUED)

- | | |
|-------------|---|
| 1983 | Principal Investigator and Project Archaeologist on the block survey, Billings County, North Dakota, by Powers Elevation for Donald C. Slawson Oil Company. |
| 1983 | Project Archaeologist on the survey of the Rocky Butte federal coal lease tract, Campbell County, Wyoming, by Powers Elevation for Texas Energy Services, Inc. |
| 1982 - 1983 | Principal Investigator and Project Archaeologist on the block survey, Billings County, North Dakota, by Powers Elevation for Ladd Petroleum Corporation. |
| 1982 | Project Archaeologist on the cultural resources survey of the Lake Darling-Souris River Project, North Dakota, by Powers Elevation for the U.S. Army Corps of Engineers, St. Paul District. |
| 1982 | Project Archaeologist on the archaeological excavations at sites 32MZ333 and 32MZ334, McKenzie County, North Dakota, by Powers Elevation for Abraxas Petroleum Company. |
| 1981 | Project Archaeologist on the survey of the Little Missouri Pipeline, Golden Valley and Billings County, North Dakota, by Powers Elevation for Wesco. |
| 1981 | Project Archaeologist on the block survey, McKenzie County, North Dakota, by Powers Elevation for Patrick Petroleum Corporation. |
| 1981 | Project Archaeologist on the archaeological testing of sites 32OL417-418, 32OL9, 32OL11, and 32OL421, Oliver County, North Dakota, by Powers Elevation for the Oliver County Commissioners. |
| 1981 | Project Archaeologist on the Lone Butte surveys, McKenzie County, North Dakota, by Powers Elevation for Gulf Oil Corporation. |
| 1979 | Crew Member on survey, testing and excavation at the John Redmond Reservoir, conducted by the Kansas State Historical Society. |

FIELD WORK, (CONTINUED)

- 1978 Crew Member on survey and testing for proposed changes in the Great River Road in Aitkin County, Minnesota.
- 1978 Crew Member for excavation at the Rainbow site on the Held Creek Watershed Project, Marion County in Northwestern Iowa for Luther College, Decorah, Iowa.
- 1977 Crew Member on survey and testing of sites at the proposed YellowSmoke State Park, Dennison, Iowa for the Iowa State Archaeologist's Office.
- 1976 Crew Member on survey and testing of sites at Elk Rock State Park, Red Rock Reservoir, Marion County, Iowa, conducted by Iowa State University.
- 1975 - 1977 Crew Member on site survey and excavation work at Saylorville Reservoir by Iowa State University.
- 1974 Attended a ten-week field school run by St. Cloud State University and the Minnesota Historical Society.

SELECTED PUBLICATIONS

- 1981a Oliver County Lewis and Clark Trail Testing Addendum: Continued Testing at 32OL417/481 (Badcurve Site), 32OL9 (Smith Farm Village Site), 32OL11 (Lower Sanger Village Site), and 32OL421 (Black Water Site). Powers Elevation, Denver. Report to Oliver County Commissioners.
- 1981b Lewis and Clark Trail Site 32OL258 Testing. Powers Elevation, Denver. Report to Oliver County Commissioners.
- 1981c Blacktail Federal 1-4 Alternat Access Shovel Testing Program at Sites 32BI298 and 32BI299. Powers Elevation, Denver. Report to Patrick Petroleum Corporation.
- 1981d Addendum to Letec Al Aquitaine 2-12: Shovel Testing Report. Powers Elevation, Denver. Report to Letec.

SELECTED PUBLICATIONS, CONTINUED:

- 1981e Patrick Petroleum Block Survey, Sections 20, 21, 29, and 30, T.145N., R.98W., McKenzie county, North Dakota. Powers Elevation, Denver. Report to Patrick Petroleum Corporation.
- 1981f Little Missouri Pipeline Survey. Powers Elevation, Denver. Report to Wesco.
- 1981g Federal 4-25-4A Access Road Survey. Powers Elevation, Denver. Report to Gulf Oil Corporation.
- 1982a Patrick Petroleum Harris Federal 1-30, Testing Program at Site 32GV52. Powers Elevation, Denver. Report to Patrick Petroleum Corporation.
- 1982b Patrick Petroleum 320 Acre Block Survey, Section 20, T.113N., R.100W., Billings County, North Dakota. Powers Elevation, Denver. Report to Patrick Petroleum Corporation.
- 1983a Ulteig Engineers, Inc., Testing of Elkhorn Substation, Site 32BI356, Billings County, North Dakota. Powers Elevation, Denver. Report to Ulteig Engineers, Inc.
- 1983b Getty Trading and Transportation Company McKenzie County Gathering System, McKenzie County, North Dakota. Powers Elevation, Denver. Report to Getty Trading and Transportation Company.
- 1983c Texaco, Inc., Block Survey, N1/2 Section 14, T.153N., R.95W., McKenzie County, North Dakota. Powers Elevation, Denver. Report to Texaco, Inc.
- 1983d Texaco, Inc., Block Survey, Sections 17 and 18, T.153N., R.95W., McKenzie County, North Dakota. Powers Elevation, Denver. Report to Texaco, Inc.
- 1983e Ladd Petroleum Block Survey, W1/2 Section 5, T.144N., R.100W., Billings County, North Dakota. Powers Elevation, Denver. Report to Ladd Petroleum Corporation.
- 1983f The Abraxas Project: Archaeological Mitigation at Sites 32MZ333 and 32MZ334. Co-authored with Marcia J. Tate and Robert A. Williams. Cultural Resources Report No. 9, USDA Forest Service, Northern Region, Missoula.

SELECTED PUBLICATIONS, CONTINUED:

- 1983g Viegel Engineering, Sentinel Butte Step I Facility, Report of Testing at Site 32GV32, Golden Valley County, North Dakota. Powers Elevation, Denver. Report to Viegel Engineering.
- 1983h A Cultural Resources Inventory of Portions of the Texas Energy Services, Inc. Rocky Butte Coal Mine Lease Tract, Campbell County, Wyoming. Co-authored with Paul D. Friedman. Powers Elevation, Denver. Report to Texas Energy Services, Inc.
- 1984a Tom Brown, Inc. Federal 19-42 Access Road Archaeological Testing at Sites 32MZ46 and 32MZ685, McKenzie County, North Dakota. Powers Elevation, Denver. Report to Tom, Brown, Inc.
- 1984b Texaco, Inc. Silurian Unit 40, 400 Acre Block Survey, McKenzie County, North Dakota. Powers Elevation, Denver. Report to Texaco, Inc.
- 1984c Report of the Initial Archaeological Testing Program at Stone Circle Site 32MZ174 at the Texaco, Inc. Silurian Unit #35 Well Pad, McKenzie County, North Dakota. Powers Elevation, Denver. Report to Texaco, Inc.
- 1984d Donald C. Slawson Oil Company, Final Report of the Block Survey of Approximately 1,360 Acres in Section 1, T.140N., R.101W., and Sections 6, 7 and 8, T.140N., R.100W., Billings County, North Dakota. Powers Elevation, Denver. Report to Donald C. Slawson Oil Company.
- 1985a Milestone Petroleum, Inc., Preliminary Report, Archaeological Testing, Site 32MZ714, at the Proposed 34-19 Federal Well Pad Location, McKenzie County, North Dakota. Powers Elevation, Denver. Report to Milestone Petroleum.
- 1985b Final Report of the 1982 Cultural Resources Survey of the Lake Darling-Souris River Project, North Dakota. Co-authored with Paul D. Friedman and Kurt P. Schweigert. Powers Elevation, Denver. Report to the U.S. Army Corps of Engineers, St. Paul District.

Mervin G. Floodman
Vita
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SELECTED PUBLICATIONS, CONTINUED:

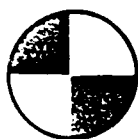
- 1985c Archaeological Investigations at 32MZ173 and 32MZ233 in the Charlson Oil Field, Northeastern McKenzie County, North Dakota. Powers Elevation, Denver. Report to Texaco, Inc.
- 1986a Final Report Test Excavations at Site 32MZ748 on the Fort Berthold Indian Reservation, Eastern McKenzie County, North Dakota. Powers Elevation, Denver. Report to E.P. Operating Company.
- 1986b Final Report of the Archaeological Testing of a Portion of Site 32MZ721 at the Texaco, Inc. Silurian Unit #40-1 Well Location, McKenzie County, North Dakota. Powers Elevation, Denver. Report to Texaco, Inc.
- 1986c Final Report of the 1983-1984 Archaeological Testing Program for the Lake Darling-Souris River Project, North Dakota. Co-authored with Paul D. Firedman. Powers Elevation, Denver. Report to U.S. Army Corps of Engineers, St. Paul District.
- 1986d Preliminary Testing of Stone Circle Site 32MZ727, for the Texaco, Inc. Silurian Unit #45-1 Well Location, Northeastern McKenzie County, North Dakota. Powers Elevation, Denver. Report to Texaco, Inc.
- 1986e Cultural Resources Survey of the Proposed Gibson Dam to Choteau Transmission Line, Lewis and Clark and Teton Counties, Montana. Co-authored with Paul D. Friedman and Marcia J. Tate. Powers Elevation, Denver. Report to Mitex, Inc.
- 1986f Draft Final Report of the Phase I Cultural Resources Investigation of a Proposed Flood Control Project Along the Pembina River, at Neche, Pembina County, North Dakota. Powers Elevation, Denver. Report to the U.S. Army Corps of Engineers, St. Paul District.

STATE
EXPERIENCE

North Dakota, South Dakota, Montana, Wyoming, Colorado, Kansas, Iowa, and Minnesota.

MEMBERSHIP IN
PROFESSIONAL
ORGANICATIONS

Plains Anthropological Association
North Dakota Archaeological Association
Professional Council of North Dakota Heritage
Colorado Archaeological Society



Powers Elevation Co., Inc.

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Toll Free 1-800-824-2550
FAX 303-321-2217

GREGORY S. NEWBERRY

VITA

PRESENT PROFESSIONAL STATUS:

District Archaeologist, Archaeology Department Powers Elevation, Inc., Denver, Colorado.

EDUCATION:

- B.A. Anthropology. University of Northern Colorado, Greeley, 1973.
- M.A. Anthropology. University of Wyoming, Laramie, 1982.
- B.S. Elementary Education. University of Wyoming, Laramie, 1985.

PROFESSIONAL EXPERIENCE:

- 1976 Research Associate, Office of the State Archaeologist of Colorado, Colorado Historical Society, Denver.
- 1978- Teaching Assistant. Department of Anthropology,
1979 University of Wyoming, Laramie.
- 1980- Field Archaeologist, Archaeology Department, Powers
1981 Elevation, Denver.
- 1982- Senior Field Archaeologist, Archaeology Department,
1987 Powers Elevation.
- 1982- Instructor, Adult Education, Eastern Wyoming College,
1983 Torrington.
- 1985 Archaeological Technician, U.S. Bureau of Land Management
Casper, Wyoming.
- 1985- Elementary School Teacher, Wheatland, Wyoming and
1987 Gillette, Wyoming.

FIELD WORK:

- 1972 Survey of the Groves Ranch, Weld County, Colorado, for the University of Northern Colorado.
- 1973 Survey of the lower Coal Creek area in Weld County, Colorado, for the University of Northern Colorado.
- 6/79- Crew Leader on the reconnaissance survey of Fort Wingate
8/79 Depot Activity, Gallop New Mexico, for the University of Southern Colorado.

FIELD WORK (CONTINUED):

6/80- 7/80	Crew Member, Beaucoup Site Mitigation Project, Phillips County, Montana, for Powers Elevation.
7/80	Crew Member for Tenneco Block Survey in North Dakota, for Powers Elevation.
7/80	Crew Member, Dillenger Ranch Block Survey, Campbell County, Wyoming, for Powers Elevation.
6/80- 8/80	Crew Member, 40 Well Pads, principally in Wyoming for North Dakota, for Powers Elevation.
6/80- 8/80	Crew Member, 15 Pipelines, principally in Wyoming, and Powers Elevation.
7/81	Crew Member, Oliver County Site Testing Program, North Dakota, for Powers Elevation.
8/81	Crew Member, Texas Energy Block Survey, Campbell County, Wyoming, for Powers Elevation.
8/81	Project Archaeologist, 30 to 40 Well Pads, principally in Wyoming, for Powers Elevation.
8/81	Project Archaeologist, 10 to 15 Pipelines, principally in Wyoming, for Powers Elevation.
7/82	Crew Chief, Abraxas Petroleum Mitigation Program at Sites 32MZ333 and 32MZ334, McKenzie County, North Dakota, for Powers Elevation.
7/82	Crew Chief, two Patrick Petroleum Block Surveys, Billings County, North Dakota, for Powers Elevation.
9/82	Crew Chief, Sohio Monument Draw Block Survey, Fremont County, Wyoming, for Powers Elevation.
9/82	Crew Chief, survey of the Souris River Project, Minot, North Dakota, for Powers Elevation.
1982	Project Archaeologist, 13 Well Pads, principally in Wyoming and Montana, for Powers Elevation.
1982	Project Archaeologist, 18 Pipelines, principally in Montana and North Dakota, for Powers Elevation.

FIELD WORK (CONTINUED):

- 7/83 Project Archaeologist, Mitigation Program at Site 4SW5057 on the Frontier Pipeline, southwestern Wyoming, for Powers Elevation.
- 7/83 Crew Chief, Mitigation Programs at two sites on the Frontier Pipeline, Wyoming, for Powers Elevation.
- 8/83 Crew Chief, Upper Souris River Testing Project, Minot, North Dakota, for Powers Elevation.
- 7/83- Crew Chief, Texas Energy Block Survey, Campbell
8/83 County, Wyoming, for Powers Elevation.
- 6/83- Project Archaeologist on numerous well pads and
small scale surveys in Montana, North Dakota, South
Dakota and Wyoming, for Powers Elevation.
- 6/84- Project Archaeologist on numerous small scale projects,
9/84 for Powers Elevation.
- 5/87 Crew Member, Mitigation at Site 32MZ721, McKenzie
County, North Dakota, for Powers Elevation.
- 5/87 Crew Member, Survey of Sheyenne River Flood Control
Project, Cass County, North Dakota, for Powers
Elevation.
- 6/87 Crew Member, Survey of Devils Lake Flood Control
Project area in North Dakota, for Powers Elevation.
- 6/87- Crew Chief, Mitigation at the Senac Dam Site, Colorado,
7/87 for Powers Elevation.

SELECTED PUBLICATIONS

- 1979 A Preliminary Report on the Reconnaissance Survey
of Fort Wingate Depot Activity, Gallop, New Mexico.
Ms produced for the University of Southern Colorado,
Pueblo.
- 1980- Numerous small cultural resource inventory reports
Present on file at the appropriate BLM, BIA, and USFS offices
and at Powers Elevation, Denver.

Gregory S. Newberry
Vita
Page 4

FIELD WORK (CONTINUED):

- 1982 A Multivariant Analysis of End Scrapers from the Northwestern High Plains. Masters thesis, Department of Anthropology, University of Wyoming, Laramie.
- 1984 Co-author of Archaeological Investigations along the Frontier Pipeline, Southern Wyoming, Final Report. Powers Elevation, Denver. Submitted to Frontier Pipeline Co., Chicago.

PROFESSIONAL SOCIETIES:

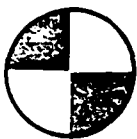
Society of American Archaeology
Plains Anthropological Society

HONORS:

Dean's List, University of Northern Colorado. 1972 and 1973

REFERENCES:

Available upon request



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Denver, Colorado 80201-2612
Phone 303/321-2217
Toll Free 1-800-824-2550

JAMES M. BRECHTEL

VITA

PRESENT PROFESSIONAL STATUS

District Archaeologist, Fort Collins, Colorado and Casper, Wyoming, Archaeology Department, Powers Elevation (District Phone: [303] 484-3335, [307] 234-6680).

EDUCATION

M.A., Anthropology, 1980, University of Northern Colorado.

B.A., Anthropology, 1976, Colorado State University.

PAST PROFESSIONAL POSITIONS

1980 - Present	District Archaeologist, Powers Elevation.
1979	Field Archaeologist, Powers Elevation.
1977 - 1978	Field Archaeologist, Office of Public and Contract Archaeology, University of Northern Colorado.

MAJOR FIELD WORK PROJECTS

February, 1986	Field Archaeologist on the cultural resources of the Senac Dam site, Arapahoe County, Colorado for CH2M Hill; by Powers Elevation.
April, 1986	Field Archaeologist on the cultural resources survey of the Mitex Gibson Dam to Choteau Transmission Line Project, Teton County, Montana; by Powers Elevation.
January, 1986	Lead Field Investigator on the cultural resources survey of various seismic lines for Western Geophysical Company, Baca County, Colorado, by Powers Elevation.
December, 1985	Project Archaeologist on the cultural resources survey of the Centennial Development, 2,000 acre tract, El Paso County, Colorado; by Powers Elevation.
August, 1985	Field Director on the cultural resources survey of the Southwest Bighorn Basin Seismic Lines for ARCO Exploration Company, Hot Springs County, Wyoming, by Powers Elevation.

FIELD WORK CONTINUED

July - October, 1985	Field Director on the survey of the Blackfeet Detail seismic lines for ARCO Exploration Company, Glacier and Pondera Counties, Montana; by Powers Elevation.
April, 1985	Lead Field Investigator on the 560 acre Citation Sheep Draw Location, Fall River County, South Dakota; by Powers Elevation.
March - April, 1985	Lead Field Investigator on a cultural resources survey of the Sun Exploration and Production Company, 160 acre block, Little Powder River Prospect, Campbell County, Wyoming, the 120 acre Deadman Creek Prospect, Crook County, Wyoming and 400 acre Jewell Block, Crook County, Wyoming; by Powers Elevation.
October - November, 1984	Field Director on the 200 and 640 acre block surveys for Citation Oil and Gas Corporation, Fall River County, South Dakota; by Powers Elevation.
April, 1984	Lead Field Investigator on a cultural resources survey for a Cities Service 80 Acre Block, Baca County, Colorado; by Powers Elevation.
1983 - 1984	Lead Field Investigator for Daniel Geophysical, Inc. seismic lines on the Blackfeet Indian Reservation, Glacier and Pondera Counties, Montana; by Powers Elevation.
1983 - 1984	Project Archaeologist for trench inspections, construction monitors, site evaluations and excavations along the 300 mile Frontier Pipeline, Southern Wyoming; by Powers Elevation.
November, 1983	Lead Field Investigator on the 160 acre block survey for Sun Exploration and Production Company, Valley County, Montana; by Powers Elevation.
August - November, 1982	Field Director for Amoco Production Company Cave Creek sour gas pipeline project Class III inventory, Summit County, Utah and Uinta Counties, Wyoming; by Powers Elevation.

James M. Brechtel
Vita
Page 3

FIELD WORK CONTINUED

July - August, 1982	Project Archaeologist on a cultural resources survey and evaluative testing of archaeological sites along Montana Highway 62, Lincoln County, Montana, for the National Park Service; by Powers Elevation.
July, 1982	Field Director on a cultural resources survey of 1,040 acres, Dunn County, North Dakota for Patrick Petroleum; by Powers Elevation.
1981	Field Director for AMAX Eagle Butte Mine testing program, Campbell County, Wyoming; by Powers Elevation.
May, 1981	Field Director on a cultural resources block survey in Hot Springs County, Wyoming, for Husky Oil Company; by Powers Elevation.
October, 1980	Field Director on the Beaucoup site mitigation project for the Kansas Nebraska National Gas Pipeline Company, Phillips County, Montana; by Powers Elevation.
October, 1980	Field Director on the cultural resources survey of a proposed pipeline for Texas Oil and Gas Company, Cheyenne and Kit Carson Counties, Colorado; by Powers Elevation.
September, 1980	Lead Field Investigator on the survey of seismic lines for Mountain Geophysical, Lewis and Clark County, Montana; by Powers Elevation.
June, 1980	Field Director on archaeological test excavations for Stearns-Roger Company at a proposed uranium tract in Park County, Colorado; by Powers Elevation.
April - June, 1980	Crew Chief during the surveying, mapping and test excavation of site 5LR549; by the University of Northern Colorado.
June, 1979	Field Director for cultural resources survey and site testing along the Natural Gas Pipeline Company of America High Plains Pipeline in Adams, Yuma, and Washington Counties, Colorado; by Powers Elevation.

FIELD WORK CONTINUED

April - June, 1979	Crew Chief during the survey of several hundred acres and subsequent test excavations at two sites in Weld County, Colorado; by the University of Northern Colorado.
June, 1978	Crew Member on the Eagle Planning Unit archaeological survey in Eagle County, Colorado; by the University of Northern Colorado.
March, 1978	Crew Member, on the Wildcat survey, Morgan County, Colorado; by the University of Northern Colorado.
September - November, 1977	Crew Member on the Raton Basin coal lease archaeological survey, Las Animas County, Colorado; by the University of Northern Colorado.
May - June, 1977	Volunteer (received honorarium) on mapping of site 5LR284.
May - June, 1976	Student Crew Member, Colorado State University Archaeological Field School, Larimer County, Colorado, Dr. E.A. Morris, Director.

STATE
EXPERIENCE

Colorado, Wyoming, Montana, North Dakota, South Dakota, Nebraska, Kansas, Utah, Idaho. Projects completed between January, 1981 and July, 1986 include: Wyoming, 379; Montana, 88; Colorado, 68.

SELECTED
PUBLICATIONS

August, 1978 Present	Over 500 small scale cultural resources to inventory and test excavation reports on file at various offices of the USFS, BLM, and BIA, produced by Powers Elevation, Denver.
1979a	<u>1979 Cultural Resources Investigation of Natural Gas Pipeline Company of America, High Plains Pipeline.</u> Powers Elevation, Denver. Submitted to Natural Gas Pipeline Company of America.

PUBLICATIONS (CONTINUED)

- 1979b "Preliminary Report of an Archaeological Survey in Weld County, Colorado." Paper presented at the 37th Plains Conference, Kansas City. Co-author.
- 1980a Historic Sites Survey in Maysville Mining District, Larimer County, Colorado. Paper presented at the 51st Meeting, Colorado-Wyoming Academy of Science, Denver. Abstracted in Journal. Submitted to Arapahoe-Roosevelt National Forest, Fort Collins, Colorado.
- 1980b Archaeological Test Excavations on a Proposed Uranium Tract, Park County, Colorado. Powers Elevation, Denver. Submitted to Stearns-Roger Company.
- 1980c Cultural Resource Investigation of the Big Sandy-Burlington Transmission Line. Powers Elevation, Denver. Submitted to Tri-State Generating Company.
- 1980d Cultural Resources Investigation of the Proposed Pipeline for Texaco Oil and Gas Corporation, Powers Elevation, Denver. Submitted to Texas Oil and Gas Corporation.
- 1980e Addendum, Beaucoup Site Mitigation Project. Powers Elevation, Denver. Submitted to Kansas-Nebraska Natural Gas Pipeline Company.
- 1980f Cultural Resource Inventory of a Proposed Seismic Line for Mountain Geophysical. Powers Elevation, Denver. Submitted to Montana Geophysical.
- 1980g Cultural Resources Survey of a 1,040-Acre Block in Williams County, North Dakota, Pogo Production Company. Powers Elevation, Denver. Submitted to Pogo Production Company.

PUBLICATIONS (CONTINUED)

- 1981a Cultural Resources Inventory of a 740-Acre Block Near Poison Spider Oil Field. Powers Elevation, Denver. Submitted to Union Oil California.
- 1981b Husky Oil Company, Block Survey in Wyoming. Powers Elevation, Denver. Submitted to Husky Oil Company.
- 1981c Cultural Resources Inventory of 1,760 Acres in the Southwestern Powder River Basin. Powers Elevation, Denver. Submitted to Sohio Oil Company.
- 1982a Excavations at Selected Sites, AMAX Eagle Butte Mine, Campbell County, Wyoming, Final Report. Powers Elevation, Denver. Submitted to AMAX Coal Company.
- 1982b A Cultural Resources Inventory of 1,040-Acres in Dunn County, North Dakota. Powers Elevation, Denver. Submitted to Patrick Petroleum Corporation.
- 1983 Co-author of Final Report of Cultural Resources Investigations Along Montana Forest Highway #62, Yaak, Montana. Powers Elevation, Denver. Submitted to the National Park Service.
- 1984 Co-author of Archaeological Investigations along the Frontier Pipeline, Southern Wyoming, Final Report. Powers Elevation, Denver. Submitted to Frontier Pipeline Company.
- 1985 Cultural Resources Survey of Southwest Bighorn Basin Seismic Lines 1 through 5, Hot Springs County, Wyoming. Powers Elevation, Denver. Submitted to ARCO Exploration Company.

MEMBERSHIP IN
PROFESSIONAL
ORGANIZATIONS

Colorado Council of Professional Archaeologists
(Charter Member)
Colorado-Wyoming Academy of Science
Montana Archaeological Association
Plains Anthropological Association

James M. Brechtel
Vita
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MEMBERSHIP IN
PROFESSIONAL
ORGANIZATIONS (CONTINUED)

Society for American Archaeology
Society for Historic Archaeology
Wyoming Association of Professional Archaeologists

RESEARCH
INTERESTS

Cultural resources management; archaeology of the High Plains/Rocky Mountains, especially Late Prehistoric period; replicative experimentation in various aboriginal technologies; ethnographic analogy; and historic archaeology.



POWERS ELEVATION

OIL WELL ELEVATIONS — LOCATIONS
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NICK G. FRANKE

VITA

PRESENT
PROFESSIONAL
STATUS

Field Archaeologist - Williston District
Archaeology Division, Powers Elevation,
Denver, CO
(701) 572-3608 (District Phone)

PERSONAL
INFORMATION

46, married, excellent health

EDUCATION

BA History, 1962 Indiana University,
Bloomington, Indiana

MA Anthropology, 1964 Indiana University,
Bloomington, Indiana

PROFESSIONAL
EXPERIENCE

1981	Principal Investigator, Cultural Resource Management Plan, Garrison Diversion Unit, North Dakota, University of North Dakota, Grand Forks, North Dakota.
1970 - 1980	Research Archaeologist, State Historical Society of North Dakota, Bismarck, North Dakota.
1970	Contract Historical Research, self-employed, St. Paul, Minnesota.
1969	Project archaeologist, Minnesota Highway Archaeological Survey, conducted by the Minnesota Historical Society, St. Paul, Minnesota.
1967	Crew member, excavating at Yankeetown site, southern Indiana.
1965	Crew member, excavating at Dickson Mounds State Memorial, central Illinois.
1964	Attended Indiana University archaeological field school, Mann site, southwestern Indiana.
1963	Crew member, survey of the Mississiniwah Reservoir, central Indiana.

TEACHING
EXPERIENCE

- 1972 - Instructor, Introductory Anthropology,
1974 Evening Division, Bismarck Junior College, Bismarck, North Dakota.
- 1968 - Graduate Teaching Assistant, Anthropology,
1970 Department of Anthropology, University of Minnesota, Minneapolis, Minnesota.
- 1966 - Instructor in Anthropology, College
1968 of Saint Teresa, Winona, Minnesota.

PROFESSIONAL
MEMBERSHIPS

Plains Conference
Society for American Archaeology
Society for Historical Archaeology

PUBLICATIONS

- 1973a (Review): Among the Indians: Four Years on the Upper Missouri, 1858 - 1862. (1972). By Henry A. Boller. Edited by Milo Milton Quaife. North Dakota History: Journal of the Northern Plains, Vol. 40, No. 4:33.
- 1973b "The Antoine Gingras Historic Site." Plains Talk. Vol. 4, No. 1:1-6.
- 1974 "Fur Trade Buttons." North Dakota History: Journal of the Northern Plains, Vol. 41, No. 3: "Editor's Choice."
- 1976a (Review): Metal Weapons, Tools, and Ornaments of the Teton Dakota Indians. (1975). By James Austin Hanson. North Dakota History: Journal of the Northern Plains, Vol. 43, No. 2:105.
- 1976b "Glass Trade Beads." North Dakota History: Journal of the Northern Plains, Vol. 43, No. 3: "Editor's Choice."
- 1978 (Review): The Fur Trade in Minnesota: An Introductory Guide to Manuscript Sources. (1977). Compiled by Bruce M. White. North Dakota History: Journal of the Northern Plains, Vol. 45, No. 2:37-38.
- 1979 (Review): Method and Theory in Historical Archaeology. (1977). By Stanley South. North Dakota History: Journal of the Northern Plains, Vol. 46, No. 1:26.